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ABSTRACT

To establish the precise effects of using MARC II in West Sussex, and how it could assist the library staff were the goals of this feasibility study. It illustrates the development of the library catalog and associated systems as both realistic and practical. It indicates what kind of repercussions will be felt by the library and how it could improve the service to the readers. The advantages and disadvantages of the various alternative means of producing the new catalog are discussed. It is considered that the relative complexity of microfilmed catalogs, compared with the printed catalog, might well generate further adverse public comment. For this reason the feasibility study team considers the printed book version as the most satisfactory method of producing the catalog. The use of disc storage facilities is expected to reduce annual operational costs. Initial development and conversion costs are estimated on the basis of the existing installation at County Hall, though future hardware provision may necessitate some modification. At the current rate of growth, under normal conditions, the size of the catalog is expected to increase by approximately 5-10% per annum. This is not likely to cause insurmountable processing problems. (Author/CH)

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WEST SUSSEX COUNTY COUNCIL

THE COUNTY LIBRARY SERVICE

LIBRARY DATA PROCESSING

FEASIBILITY REPORT

County Hall
Chichester
Sussex

July 1971

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THE COUNTY LIBRARY SERVICE

Library Data Processing

Feasibility Report

The report has been seen and approved by the County Librarian, representatives of the Management Services Unit (O. & M. Section) and the Management of the Data Processing Division.

CONTENTS

		Page
1	Introduction	
1.1	Terms of reference.	1
1.2	The BNB/MARC project.	1
1.3	The West Sussex project.	1
1.4	Mechanisation and its effects.	1
2.	Present Catalogue	
2.1	Its purpose.	3
2.2	Administrative view.	4
2.3	Public view.	4
3.	Proposed Catalogue	
3.1	Main annual catalogue.	6
3.2	Supplementary cumulative catalogue.	6
3.3	Administrative view.	7
3.4	Public view.	8
3.5	Catalogue files.	8
3.6	Printed catalogue.	10
3.7	Fiction and junior stock.	11
3.8	Design alternatives.	11
3.9	Printing alternatives.	11
3.10	Catalogue production alternative frequency.	13
3.11	Microfilm.	13
4.	Book Ordering	
4.1	Present system.	15
4.2	Proposed system.	16
4.3	Design alternative.	17
5.	Book Charging	
5.1	Present system.	18
5.2	Proposed system.	18
5.3	Design alternatives.	19
5.4	Reservations.	19
5.5	Data transmission.	20
6.	Conversion Work	
6.1	Location coding.	21
6.2	Standard Book Numbering (SBN)	22
7.	Conclusions	23
8.	Recommendation	24

Appendices

Anticipated growth in number of borrowers)	I
" " Book stock)	
Present card catalogue records	II
Present computer produced catalogues (author and classified)	III (1-2)
Present catalogue system (including ordering)	IV (1-5)
Proposed ordering, cataloguing stock editing and book charging systems	V (1-11)
Example of page layout of the new catalogue (author and classified)	VI (1-2)
Catalogue conversion book file creation and file creation	VII (1-3)
File type content and size assessment	VIII
Data preparation and machine utilisation volumes	IX
Cost implications	X

1. INTRODUCTION

1.1. Terms of Reference

To examine and advise on suitability and cost of automation of library routines, in particular provision of up-to-date catalogues to service points, with regard to the BNB/MARC project.

1.2. The BNB/MARC Project (British National Bibliography & Machine Readable Catalogue)

The objective of the MARC project is to supply to any Library Service catalogue data of current books in magnetic tape form so that the recipient library is relieved of the necessity of manual cataloguing, classification and book ordering routines.

Over the last decade, many library problems, resulting from increased volume of publications and wider interest in literature, have forced the need to find an urgent solution to the handling and reproduction of vast quantities of bibliographical data. To overcome these problems, the MARC project, one of the most significant steps forward in librarianship, was originally conceived in 1964 in the U.S.A. by the Library of Congress as an experiment to test the feasibility of producing catalogue data in machine readable form. The principles were accepted and the system is now widely operational in the U.S.A. Concurrent with this exercise, in collaboration with the Library of Congress, the British National Bibliography laid the ground work for MARC II.

1.3. The West Sussex Project

The County Librarian, (with technical advice from BNB and financial aid from the Office of Scientific and Technical Information) therefore initiated this feasibility study to establish, on the basis of detailed fact finding and critical examination, the precise effects of using MARC II in West Sussex and how it could relieve the burden of library staff, particularly professionals.

This step is particularly logical when taking into account the long term growth potential and likely implications of local government reorganisation. The economic justification of mechanisation becomes nearer as the number of libraries benefiting is increased and as the effects of economies of scale are felt. (see Appendix I)

1.4. Mechanisation and its Effects

This Authority, having recognised the need for modern techniques, have already produced as an interim step an abbreviated catalogue, known as the 'mini' catalogue, containing only minimal information, using manually prepared source data. This was to be developed in the long term into proper catalogue form, containing full bibliographical and location data. The task of developing the catalogue to its ultimate form is now however considerably eased with the ready availability of the MARC tape.

Mechanisation is therefore not a new experience to this library service. Computer book issuing also has been operational on a small scale for a number of years, but apart from its principal function of recording book issues and returns, only minimal administrative advantage is gained by automation of overdues and a register of borrowers. The intention is now therefore to look beyond this early stage of development towards phase 2 and turn attention to the larger areas of tedious and uninteresting administrative work, such as book ordering, reservations, stock control, cataloguing and the classification processes. This represents a major step forward. The economic and administrative advantages and direct benefits to the public are wide ranging and in some cases extremely difficult to quantify. The financial

1.4. 1 Administrative and Professional View

(i) It will enable exploitation of the book stock to its maximum advantage. This is particularly important since the County's annual expenditure on new books has, until recently, been consistently among the lowest in the country. It is also important to note that book prices have increased by 80% over the last five years.

(ii) The new system will be much more responsive in dealing with reservations, catalogue enquiries etc. and the need for borrowers to make requests will, in a large number of cases, be eliminated.

(iii) Substantial routine non-professional work will be eliminated (the current O & M investigation will take this into consideration when establishing fresh staffing standards.)

(iv) Substantial reductions are likely in routine work now undertaken by professionals. The effect will be to elevate the role of professional librarianship in this County and ease recruitment of high calibre people.

1.4. 2. Public View

(i) The catalogue, in its new format will assist readers to become more proficient in their general knowledge of the available book stock and result in greater reader satisfaction.

(ii) The time taken to satisfy book requests will, in a large majority of cases, be considerably reduced. A larger selection of books will be brought to the public's notice through the new catalogue and access to these books will be speedier through the location index.

(iii) Improved stock editing and control will generate better stock circulation and more even distribution throughout the County.

2. PRESENT CATALOGUE

2.1 Its Purpose

This is the centre of the library's operations. Its detailed arrangement, content, style and availability is therefore of vital importance and its effect on general operations and methods is considerable. More specifically, the library non-fiction catalogue is a register of stock holdings, with full bibliographical details, of books held at multiple service points throughout the County. Ideally, to serve the public and staff adequately, it should be up-to-date and conveniently arranged for inspection and be capable of continuous amendment to reflect the constantly changing stock situation. More specifically, the catalogue should provide

(a) A precise means of identifying the book to which it relates.

(b) Information of the branch which holds each book.

(c) Adequate bibliographical data.

(d) Total range of County stock subject by subject.

Broadly, there are three types of catalogue currently in use. (see Appendices II and III).

(i) Stock Register

This falls under heavy use by the staff, mainly for stock control purposes. Numerous cabinets contain cards (one to each volume) held in author sequence, relating to all non-fiction stock held throughout the County.

(ii) Union Card Catalogue

This relates to pre-1966 stock and is held in both author and classified sequence showing bibliographical data. Due to the inadequacies of this particular catalogue (it is seriously out of date) and the fact that it will shortly undergo processing into computer print form, the Stock Register (i) above serves, though inadequately, as the Union Catalogue also.

(iii) Union Computer Print Catalogue

This catalogue in book form relates only to post 1966 stock editions. Copies of this catalogue, printed six times yearly, are held at each of the regional headquarters. In addition cumulative supplementary catalogues, which are produced every two months show more up-to-date stock editions, but contain only minimal bibliographical data. Book locations, withdrawals and stock transfers are not shown.

In the past, the gradual build-up of the computer catalogue, by including only post 1966 stock acquisitions has undoubtedly postponed realisation of the full benefits of the computer catalogue. The maintenance of duplicate card systems is cumbersome. For example there are approximately 57,000 book stock changes per annum, all of which necessitate changes to some or all of the catalogues.

Maintenance work is required at each and every point holding the catalogue. There now exists a total of approximately 1.23 million cards of which about 400,000 are active in any one year.

The existing cataloguing system, including the ordering process is shown in Appendix IV (pages 1 - 3).

(iv) Subject Index

An inadequate and simple index to the main subjects represented in the 'mini' catalogue up to 1968 is the only subject index available. It has been neither up-dated nor maintained.

2.2. Administrative View

The existing range of card and 'mini' computer catalogues achieve only some of the objectives set out above; for example

(a) Apart from a single comprehensive stock register, located at headquarters and showing only minimal book data, there is no single comprehensive bibliographical record available to either staff or the public.

(b) There are 17 sub-branches (representing 60,000 borrowers) without up-to-date non-fiction catalogues. All requests for information are channelled through the 7 regional headquarters.

(c) Regional headquarters possess pre-1966 non-fiction catalogues in respect of their own region only. Up-to-date 'mini' catalogues are however held at these points.

2.3. The Public View

It has already been inferred in the opening paragraphs that the existing range of catalogues falls substantially short of the standards required for a library service of this size. It is strongly suspected that the low percentage of catalogue users among the public are indicative of this. In its present differing format, the catalogue is undesirable and may even be a deterrent from the borrowers point of view. It is however extremely difficult to quantify the importance of this aspect. Summarised, the disadvantages to the borrowers are

(a) Borrowers interested in a subject need to see the whole range of material in the Library's stock, more particularly the most recent titles. A catalogue which is unreliable or out-of-date is of limited value.

(b) Due to its differing format (cards, computer print) the catalogue is confusing to some borrowers.

(c) Borrowers are known to be further confused by assuming that printed catalogues entries relate to books held at each particular branch. In other words, having used the catalogue and indentified his needs the borrower immediately assumes (In the absence of a reference to location) the book to be readily available from the shelf. If the book is not on the shelf, the borrower may assume it is already on loan, perhaps returning again and again before finally ascertaining (through verbal enquiry this time) that the book is permanently located at a different branch entirely.

(d) There is no public record of approximately 17,000 volumes held in County reserve store. Many of these items are standard works required by serious readers.

3. PROPOSED CATALOGUE (See Appendix V pages 1 - 11)

3.1 Main Annual Catalogue

The proposal is to produce (using as a basis the external MARC file issued weekly by BNB) author and classified catalogues in book form once per year. Initially, 28 copies would be obtained from the master record thus ensuring that every permanent service point throughout the County would be provided with complete catalogue data in respect of all County stock. MARC data transferred and held on the local file will remain for six months to allow ordering operations to be carried out. On the assumption that only a portion of the publications contained on the MARC tape are finally purchased, then all remaining records will be discarded, thus ensuring that the file always remains about the same size.

For easy reference the main catalogue will show entries relating to the same book under more than one author (if appropriate) or classification, thus providing alternative means of accessing the information. Book locations, using readily understandable codes, will be shown against each entry together with the number of copies at each service point. Thus, reservations would in future be directed to the branch holding the copy, and not their headquarters as at present, in respect of approximately 600-700 requests per week. (34,000 per annum).

The estimated size of the new catalogue would be -

	Frequency per annum	No. of Pages	No. of Copies
Author	1	8,200	28
Classified	1	8,500	28
Subject Index	2	200	28

Each classified catalogue will be arranged with double column entries, approximately 14 per page, printed on one side only; the author catalogue will be arranged in single column pages (See Appendix VI pages 1-2).

3.2 Supplementary Cumulative Catalogue

Constant withdrawals, new additions and stock movement between branches will necessitate supplementary catalogues, so as to provide up-to-date stock positions in respect of every location.

It is proposed to show all stock changes on a cumulative basis since publication of the previous main catalogue. The supplements should be produced separately, in author sequence, (once every two weeks) and classified sequence (once every four weeks).

This method of publishing the recent stock changes inevitably imposes repeated processing and printing of large quantities of data. This is a recognised disadvantage and reprinting frequency should be kept to a minimum as far as possible.

The estimated size of the supplementary catalogues would be

	Frequency per year	Average No. of Pages	No. of Copies
Author	25	150	28
Classified	12	343	28

3.3 Administrative View

3.3.1. Advantages

(i) Branches will, in future, when dealing with requests, be able to report direct to the branch holding the book in demand (using the catalogue location code to do so) thus eliminating the need for regional headquarters to repeatedly inspect the same information. It is estimated that approximately 55% of all requests which now involve over four weeks delay could, whenever urgently required, be satisfied within two to three days of receipt.

(ii) More convenient to handle and read since it will only be necessary to scan the pages rather than examine each card as at present. It will be compact, portable and approximately 14 entries can be seen simultaneously making comparison easy.

(iii) It will ease pressure on headquarters staff accommodation and stock since a large proportion of unsatisfied requests now tend to terminate at Chichester.

(iv) It will eliminate a considerable volume of manual work associated with card catalogues in the regional headquarters and County headquarters.

(v) Allows wider distribution of the catalogue at no extra effort (particularly important in view of likely local government reorganisation).

(vi) Improve overall accuracy of the catalogue.

3.3.2. Stock Editing

The process of stock editing, which should be continuous, is the filling of gaps in library stocks and the removal of out of date editions and worn volumes. This ensures that a balance is preserved between books in popular demand and a representative stock of basic text books. Editing ensures that the stock is

(a) Up-to-date,
(b) In good condition,
(c) Tailored to the needs of borrowers.

Apparently, because of limitations of catalogue records branches are required to forward all books which they consider appropriate for editing to headquarters, where they are checked against the stock register (located on the second floor of the building). However, partly because of the physical limitations of headquarters accommodation and partly because of the considerable increase in new and larger libraries of recent years and consequential work dealing with new stock, the whole process has been very ineffective. A solution to this problem is wide ranging and includes various aspects of organisation and staffing. However, all these things hinge on one major factor, which is the need for an effective catalogue showing locations, so that each regional and branch librarian will, by simple reference, be readily aware of stock deficiencies. This, coupled with recently introduced changes in library policy of involving branch librarians in stock selection, and a programme of stock revision in certain subjects, will bring greater awareness of the importance of a balanced stock. The

value of good stock editing cannot be over emphasised and its value to the readers is considerable though difficult to quantify.

3.4. Public View

Advantages

1. Every borrower would have the opportunity to readily refer to a consolidated, comprehensive, up-to-date catalogue. This will improve the image of the Library Service (and related computer applications) when up-to-the-minute information can be supplied of all books, both in stock and on order.

2. Book requests will be more promptly dealt with.

3. The catalogues will be easy to read and handle.

4. A number of people would be able to use the catalogue simultaneously.

5. Borrowers would have less need to refer to staff.

6. Borrowers requiring a book urgently, are very often prepared to make a journey to the library holding a copy. (e.g. Horsham and Crawley). The inclusion of location data will make this possible, and thus lead to cost reduction.

3.5. Catalogue Files

The information necessary for printing the annual classified and author catalogues is held on the Master Catalogue File of non-fiction books and the All Titles File of non-fiction, fiction and children's books.

Full cataloguing details of non-fiction titles purchased since the last annual print and minimum details of titles deleted are held on a Supplementary Catalogue File.

3.5.1. Master Catalogue File

The records will contain the following information, where applicable.

ISBN or pseudo ISBN
Shelf indicator
Dewey classification
Cost indicator
Author
Title
Sub-title
Annotation
Series title
Different form of name
Pseudonym
Further reference
Joint authors
Editors
Translators
Publisher
Publication date
Edition
Collation
Added entries
Analyticals

3.5.2. All Titles File

Each record will contain the following information

ISBN or pseudo ISBN
Non-fiction marker
Status marker
Dewey classification
Author
Short title
Total number of copies
Location Code) Repeated to a maximum
) of 270 times (average
Accession Number) of 4 times)

3.5.3. Supplementary Catalogue File

There will be two types of record on this file. New title records will be as for the master catalogue file. Records for deleted titles will contain the following

ISBN or pseudo ISBN
Deletion marker
Dewey classification
Author
Short title

3.5.4. File Creation

The Master Catalogue file will be created initially by converting the 'mini' catalogue files of the post 1966 and pre-1966 titles, and updating the entries where necessary. This conversion will also produce the non-fiction records for the All Titles File. These records will have to be updated with the locations and accession numbers obtainable from the manual stock file. For fiction and children's books new records will be created from the book cards. See pages 1 and 2 of appendix VII.

3.5.5. Amendments

Titles purchased since the last annual catalogue print will create records on the Supplementary Catalogue File. The full cataloguing details of titles published in the last six months will be picked up from an accumulated file of the weekly MARC tape. It is proposed to do this via a computerised ordering system but the MARC information can be used solely for cataloguing. For titles which do not appear on the accumulated MARC tape the full cataloguing details will have to be input by the library.

Extra copies of titles which appeared on the last annual catalogue print will amend records on the All Titles File. Withdrawing a copy of the title will also amend the record on this file and when the last copy is withdrawn the record will be deleted, and a deletion record will be created for the Supplementary Catalogue File.

When books are moved from one location to another the relevant title records on the All Titles File will have to be amended. Locating, re-locating and withdrawing of books will be done using the A.L.S. Equipment. Program NISH 2 of the Book Charging System will need to be amended to stream off from a transactions file these special records.

These records of book movement will have the book accession number only and not a Standard Book Number (SBN). To amend the files as described above the books' SBN is required, so a Link File is to be maintained giving the SBN for each accession number.

This Link File will be created from the All Titles File (see page 3 of Appendix VII) and will be amended as books are purchased and withdrawn.

3.6. Printed Catalogues

The complete author and classified catalogue of non-fiction titles will be printed once a year and a subject index will be printed twice a year. During the year cumulative supplementary catalogues will be produced at regular intervals. The author catalogue will be two-weekly and the classified catalogue four-weekly. The processing required to produce these prints is shown in pages 4 and 5 of Appendix V.

3.7 Fiction and Junior Stock

The catalogues only list adult non-fiction stock, so if the manual cards records of all books are superseded by computer files it will be necessary to print lists of the adult fiction and junior stock. Cumulative supplementary lists of additions and withdrawals of stock will be printed three-monthly and complete lists will be printed annually. The All Titles File holds the required information to print these lists and pages 6 and 7 of Appendix V shows the process.

There will be separate lists for fiction and junior titles but they will both be printed in author order. For each title entry, SBN, author, short title and Dewey classification and location codes will be printed.

The estimated size of the printed lists would be

	Frequency per annum	Average No. of Pages	No. of Copies
The 'main' annual list	1	1,600	28
Cumulative supplements	3	150	28

3.8. Design Alternatives

The printed catalogues are required to show the location of the books so the first design of the Master Catalogue File had the location information as part of the record for a title. The main disadvantage of this was that for every book location change a record had to be created on the Supplementary Catalogue File and this entailed accessing the Master Catalogue File for the record details. The Master Catalogue File would have been read every week to access only 1½% of the records.

Holding the location information on the All Titles File does mean that there are two records in the system for all non-fiction titles but this file is an important link with the Book Charging System. Consideration was given to printing the Accumulative Supplementary Catalogues from the All Titles File, with the minimum of details and no added entries of cross references.

However it was felt that this would not give a satisfactory service to the borrowers. Titles published during the last year are the books which borrowers will have read about in the press and be looking for in the library, so full cataloguing details are required.

3.9. Printing Alternative

Current 'mini' catalogue photocopying is undertaken by a specialist company, Data-Pro Copy Services, Ltd., at Hove, at an annual cost of £2,060. Using this service it is estimated that the new catalogue would cost £6,794 per annum. However, this is in no way a negotiated price and the acceptance of tenders for the work might provide some reduction in cost.

The time required for paper size reduction, collation, punching and photocopying, on the basis of existing 'mini' catalogue service, and informal discussion with the company, would not be unreasonable for handling the annual print out of the proposed main catalogues.

Supplementary catalogue processing would however take up to 2 days, including collection and delivery from Chichester. Add to this the time required to distribute the copies to the branches and the overall time lapse would be between 3 and 4 days. There is therefore the danger that supplements, particularly author, will be to some extent out of date before they reach the sub-branches.

One alternative would be to undertake the work at County Hall but the Printing Department do not at present possess equipment suitable to deal with work of this volume. There is however a process which would be ideally suited to the work, marketed by Addressograph Multigraph, called the Total Copy System. In essence, it is an integrated rotary photocopying and offset litho machine, with automatic sequence control to allow a wholly uninterrupted process - unlike the currently used County machinery. It enables large quantities of short run work, such as this, to be dealt with speedily when compared with the more conventional machines. The A.M. equipment has the facility of using ordinary photocopies or prints as the master plate thus eliminating the need for costly paper or plastic plates and associated handling time.

Though the case has not been fully examined, it is anticipated that use of this machine would have considerable advantage when viewed against the Printing Section's current commitments in relation to other Departments. New work would however have to be geared to existing print room commitments and the question of accommodation would also need to be examined.

The magnitude of the punching and collation tasks would necessitate the use of up-to-date automatic equipment and it is understood that though the Printing Section does not have such machinery at the moment the question is currently under active consideration in relation to other work. Assuming the County possessed such a machine the printing costs could be reduced from £6,794 per annum to £1,600 per annum, a cost reduction of £5,194 per annum. Included in this estimate is the likely cost of computer print paper size reduction to enable easier paper handling which could be achieved by using a high output A-M Electrostatic Copier (2300). Reduction facilities of between 20% and 35% of the original paper size is possible.

3. 9.1. Computer Typesetting

To improve the appearance of the catalogue printing and reduce the total number of pages, computer output printed by the typesetting technique has been examined and quotations obtained for a bureau, Computaprint, which specializes in this field. The estimated production cost is £4,500. The advantages of this method are that printing does not have to be done on the computer line-printer and the total number of pages for the annual catalogues can be reduced from 16,700 to about 7,000 of A4 size. If the bureau also printed the copies it would cost ~~another~~ £5000.

3.10. Catalogue Production Alternative Frequency

In order to reduce the sizeable task of printing and reproducing the main catalogue to manageable proportions, the suggested method is to hold the catalogue in twelve sections, updating and republishing one section each month. This would be accompanied by the latest issue of the cumulative supplement. A further alternative to the production of a single main catalogue is to provide separate divisional catalogues, one to each division. This touches on a point of policy, and an area which is outside the terms of reference of this particular exercise. On balance, it is considered that ideally the published catalogue should reflect the overall unity of the library as a County service. There is also the question of how far the attention of each division would need to be drawn to other divisions' stock. This would however be a disadvantage for headquarters staff when reviewing stock maintenance and would hinder rather than help if the comprehensive catalogue were separate for each region (even allowing for a reduction in the existing number of regions from 7 to 4).

Furthermore, it is estimated that the stock holdings of the divisions overlap each other to the extent of 50% - 60% of the titles which infers that four separate catalogues would be something like twice the size of a single County catalogue. In essence it is considered that great administrative financial advantage lies in the publication of a County catalogue rather than separate divisional or sectionalised catalogues.

3.11. Microfilm

There are several forms of microfilm and associated equipment currently available, marketed by numerous manufacturers. During this exercise, because of the limited time available, only one service has been considered, that marketed by N.C.R. and Centre-File. In general, microfilm will give high capacity and high density data storage with reasonably rapid access. Each record would be indexed and, by means of a simple selection method, retrieval of the information by viewing, as with a television screen, is not unduly complicated.

3.11.1 Computer Output Microfilm (C.O.M.)

This is a system of producing microfilm direct from magnetic tape. The cost of suitable hardware to produce microfilm in this way is expensive and very few organisations have yet been able to justify the necessary expenditure. Centre-File, a bureau, in London however provides this service.

The microfilm can be produced in card or fiche form, at a 42 reduction ratio, each containing up to 220 pages of printed information or approximately 3,000 book records. N.C.R. have, on the basis of preliminary discussion, recommended the use of C.O.M. Centre-File service for reproduction of the main annual catalogue. Microfilming of computer print-out is recommended for the relatively low volume supplementary catalogues. This would provide a 24 reduction ratio, giving 65 ft. of print-out per jacket fiche or 900 records per jacket.

The advantages of C.O.M. fiche is that it eliminates the need for vast quantities of computer generated paper print-out and subsequent photocopying and the problems of handling and storing large quantities of paper would be overcome.

The question of user convenience is however extremely important and should be examined carefully. At the larger libraries it would be necessary to install two readers, possibly three at headquarters. To install only one reader at each point would run the risk of conflicting needs between borrowers and staff. Problems of operation would probably arise and instead of attracting a larger proportion of borrowers to use the catalogue there is the real danger that the public would be deterred. There is also the considerable problem of fiche security. Records could unintentionally or otherwise be very easily misplaced or removed entirely. For this reason, and the difficulties of educating the general public it is difficult to see fiche in general use. One means of overcoming the security aspect is to use roll film in casettes which would be locked into position on the reader. The disadvantage with this however is the fact that at least 5 cassettes would be required for the two annual catalogues and another casette for the cumulative supplement. Considerable cassette changing would have to be done by the staff for the borrowers.

The major advantage of fiche as opposed to printed catalogues is the relatively low overall cost which is calculated on the basis that three readers would be located at headquarters, two at six large branches and one at each remaining branch.

Capital costs of £7,800 would be depreciated on the basis of five year machine life. Microfilming, processing and photocopying costs are calculated on the basis of using the Centre-File C.O.M. service for the main annual catalogue, whilst the supplementary catalogue would be processed by the jacket fiche method. Estimated total annual costs are £2,500 per annum.

4. BOOK ORDERING

4.1. Present System

At present all non-fiction stock is ordered centrally and fiction stock is purchased on a regional basis. There are seven regions. Purchase of stock may be initiated by a reader request for a particular title or, as is more usual from book reviews, publishers catalogues etc. Records now generated consist of typed order cards which are retained by the cataloguing section and the master record relating to the order. Book details are then transcribed and tabulated on to the official order form for onward transmission to the supplier. At three to four week intervals, current orders are checked and books still outstanding are typed on to a progress report list which is forwarded to the suppliers. Upon receipt of the books the original order card is annotated with delivery details. After processing in the cataloguing and clerical sections all books are repacked and transported to the regional headquarters where relevant book cards are typed (for stock control purposes).

The process for ordering children's books is broadly similar, though in certain respects a decentralised function. Branches create their own individual orders, though the method adopted is usually varied. In some cases the order consists of simply passing the original reservation slip or marking up the suppliers catalogue to indicate books which should be supplied. Suppliers invoices relating to individual branches are forwarded to headquarters where all finance processing takes place. It is important to note that because of the manner of dealing with fiction acquisitions, only headquarters and the respective sub-branches are aware of the location of any particular volume. The regional headquarters are in ignorance of book location data.

Annual book purchase statistics are as follows

	Titles	Volumes
Adult non-fiction	7,300	20,400
Adult fiction	2,800	20,000
Children's non-fiction)	10,000	28,200
" fiction)		
	20,100	68,600

4.2. Proposed System

4.2.1. Ordering System File

The basis of the ordering system file is the accumulated MARC information held on a Local Master File. When it is decided to order a particular title the following fields are added to the appropriate record.

Suppliers code (or suppliers name and address if not standard)	Repeated for repeat orders.
Place of publication of obscure publishers	
Copies ordered	
Copies delivered	
Price	
Date of order	
Date book due	
Suppliers report code	
Date of first chaser	
Suppliers report code	
Date of second chaser	
Suppliers report code	

Location code (region)	Repeated for each region
Collection code	
Number of copies	

4.2.2. Processing

Page 1 of Appendix V shows the weekly order processing. The weekly BNB/MARC tape has parameters applied to it to select specified types of records and specified fields of those records. The output records are formatted as required for the Local Master File. This week's records are then merged with the current Local Master File and records which have been on the file for more than six months may be written to an 'out of date' file, but will probably be dropped altogether. The updated Local Master File then has several types of message applied to it, such as 'order a book', 'book received', 'catalogue a book', 'cancel an order', etc. As a result of these messages, and program checks on the state of orders, the Local Master File is updated and several reports are printed.

4.2.3. Printed Output

The three printed outputs are

(i) Books on order or in process.
(ii) New orders or reminders.
(iii) Catalogue records.

Books on order, or in process, are sorted into author order and the printout contains the following information - author, short title, suppliers code, date of order, date of reminder, suppliers report, date of receipt, locations. New orders or reminders are sorted by supplier and printed for direct despatch to the supplier. Catalogue records are printed for the non-fiction books which have been received this week so that it can be seen what details are going on to the catalogue file.

4.2.4. Output Files

There are two output files

1. Updated Local Master File.
2. Books received.

The book record will go forward to the Catalogue System as new input to the Catalogue, All Titles and Link Files.

4.3. Design Alternative

BNB proposed that our Local Master File, and therefore our Master Catalogue File, should have the same structure as the BNB/MARC File. That record structure is basically fixed data fields, a variable length directory giving the lengths and starting positions of the following variable fields, and the variable fields in an unbroken string of data. Records of this structure cannot be programmed efficiently using COBOL. West Sussex County Council standards require the variable field to have a maximum length, and it is essential that these are adhered to.

There is a sub-routine which enables one to access the variable field information easily, and this could be made available to other authorities who wish to use the system.

5. BOOK CHARGING

The main branches of the County Library have installed Automated Library Systems equipment to record the borrowing and returning of books. The borrower's number, numbers of books borrowed and returned are copied on to paper tape, which is processed by the computer to produce notices of books which have been on loan longer than the allowed time.

5.1. Present System

The present system is shown on pages 4 and 5 of Appendix IV. The transactions, which the A.L.S. equipment has recorded on paper tape, are first checked for validity and then the correct transactions update the Master File of current book loans. As the master file is updated each record is checked to see if the book should have been returned and, if so, the name and address of the borrower who has the book on loan is obtained from the borrower's file, and an overdue notice printed for sending to the borrower.

The first overdue notice is a postcard. If the book is not returned after a further two weeks a Branch Librarian's letter is sent, two weeks later a County Librarian's Letter, and after this the Clerk is advised. The computer system only prints the book accession number on all the overdue notices, details of the authors and titles are added manually to the County Librarian's letter and the Clerk's advice from the card accession file.

5.1.1. Administrative View

For 14% of the books which are overdue the Library staff have to copy the author and title details from the card accession file before the overdue notice can be sent out. People who have received postcards or Branch Librarians' letters often contact the library to find out what book the accession number represents. This means that the library staff have to consult the card accession file for about another 11% of the overdue books.

5.1.2 Public View

92% of the overdue notices sent to borrowers only quote the book accession numbers and approximately 13½% of these borrowers do not know what book is being referred to. In these cases they will either telephone or write or even visit the library to find out the appropriate information. This situation is not conducive to good public relations.

5.2. Proposed System

The proposed system would print the book accesssion number, author and short title for all overdue books. Pages 8 and 9 of Appendix V show the system flow chart. Knowing the book's accession number the SBN can be picked up from the Link File and then the author and short title can be read from the All Titles File. All the overdue notices would be printed on pre-printed stationery instead of the postcards and sticky labels as at present. The borrower's name and address would be printed so that the overdue notice could be folded and enveloped in a window envelope by the equipment in the Treasurer's Department.

5.2.1. Administrative View

The library staff would be relieved of all manual card accession file searching and would not have to stick the overdue labels on their printed notepaper. There would be no borrowers enquiring about authors and titles.

5.2.2. Public View

The borrowers would know exactly which book should be returned without having to contact the library.

5.2.3. Files

The extra files necessary to implement the proposed extension to the Book Charging System are the All Titles File and the Link File as described in the Cataloguing System.

5.3. Design Alternatives

The principal objective, which resulted in the above proposed extension to the Book Charging System, was the discontinuation of the manual card accession files. Each Regional Headquarters of the County library has an accession file for all the books in its branch libraries and when a book changes region its accession card has to be relocated and refiled. To create a computer file giving author and a short title by accession number for all books would necessitate a file of 700,000 records, which would occupy four 2 400 ft. magnetic tapes or 540 cylinders of disc, and for multiple copies of the title the author and title details would be repeated on the file. There are three alternative ways the required information could be obtained from the file.

1. Annual print of the file, plus weekly cumulative supplement prints for each branch.

2. For each branch, annual print of their books, plus a weekly (or monthly) cumulative supplement print for the additions to their stock.

3. Via terminal with the file on-line.

The disadvantages of option 1 would be the mountain of computer output. Option 2 would lessen the amount of output but has the added problem of keeping the information up-to-date when the books are moved.

For option 3 to fully satisfy the library's needs the terminal would have to be available for enquiries during their complete opening hours, i.e. 9.30 a.m. to 7.30 p.m. Monday to Saturday. At times when on-line enquiry was not possible an overnight search would have to be made on the file and the member of the public, or staff, notified later. A further disadvantage would be the cost to the library of this on-line file.

5.4. Reservations

To find out who has a book which another borrower requires, an enquiry is made of the master transaction file via the terminal. To make an enquiry it is required to know the book accession number. At present the stock register card file is consulted to obtain this number but in the proposed system an overnight search would be done on the All Titles File by the computer using the book's SBN (see page II of Appendix V).

5.5. Data Transmission

The question of automatic transmission of paper tape data from branch libraries direct to headquarter has been explored. Equipment considered, marketed by ITT. Creed, was the Envoy Data Printer which provides both paper tape and independently printed copy transmission using the normal G.P.O. telephone circuits. The advantage of using high speed equipment is that it would then be possible to update the computer issues file thus ensuring that any reservation enquiries via the on line terminal at headquarters would be answered with up-to-date information. Remote reservations (books on which extended loan are required) could also be punched up direct on to the tape (with the safeguard of printed verification) thus avoiding the necessity for separate input document preparation and subsequent punching as at present. The added facility of printed copy transmission would also enable the service to dispense with six of its current seven relatively expensive Telex machines. However even taking this saving into account, the overall cost of installation, plus transmission line costs would be initially in the region of £10,000 plus an annual recurring cost of approximately £5,000. This substantially out-weighed the benefits which might have been obtained and the conclusion is that an improved transportation service throughout the County could provide almost the same advantages but at considerably less cost. The cost of manual collection would not be more than £1,800 per annum and maybe less.

6. CONVERSION WORK

6.1. Location Coding

A principal feature of the new catalogue will be book location codes, each consisting of two alphabetic characters to identify the Region and Branch, together with the number of copies held at each service point. The proposal is to transfer this data manually from the existing Headquarters Stock Register (alphabetic sequence) on to the 'mini' catalogue (also in alphabetic sequence) preparatory to punching. However the preferred alternative is to accomplish this automatically by using the existing ALS equipment at computer libraries supplemented by portable ALS equipment (hired) for use in the Browne Sub-Branch Libraries. The task of converting the location data into machine readable form is as follows

(i) Remove book from shelf.

(ii) Stamp the book twice with new computer number. (once on the back of the title page and once on the book pocket).

(iii) Using ALS equipment, charge the book inserting both book card and the location card

(iv) Replace the book card in the book.

(v) Place book on shelf.

The task of transporting books to and from the shelves on trolleys could be undertaken by library staff in conjunction with other duties. This cost element is therefore excluded from the total cost figures.

To avoid unnecessary cost and effort, it is considered advisable to defer this particular task until as late as conveniently possible, at which point all stock editing would cease until implementation of the new system. A suitable inactive period might be three months.

An essential pre-requisite is the need to redesign the computer book cards to include author, and title details so that in future cards may be held in author sequence when the book is on loan (in Browne libraries only). Additionally to ensure rapid discharging it will also be necessary to reproduce the author details on the book pocket. The work load involved in stamping, charging, and writing author and title details on the book card and author details on the book pocket amounts to approximately 35 man weeks work. This implies the need for three portable ALS machines to accomplish the task within the three month period. Apart from physically moving the books, it is difficult to see how the service with its present staffing resources would undertake the additional work. It is therefore suggested that temporary labour could be employed, perhaps supplemented by overtime working by more experienced existing staff. Labour costs are estimated at £1,000 plus equipment costs of approximately £500. Approximately 500,000 book records are involved.

6 2. Standard Book Numbering (SBN)

The SBN system has been evolved because, with the growing use of computers, there is a need to address the computer file by a comparatively simple, but unique book identification code. Because of its comparatively recent introduction, this code has not been applied to all County stock, only relatively new publications. In the case of books already stocked but without SBNs it is intended to generate 'pseudo' SBNs by using an entry identification number now used in the existing 'mini' catalogue system. (See Appendix VII).

Apart from the obvious advantages of complying with national standardised development of this kind it has considerable overriding advantage to this Authority since it is intended to evolve ultimately a comprehensive system, in conjection with booksellers and other library authorities, for the supply and loan of books.

Of the post 1968 stock (SBNs introduced at this time) it is estimated that it will be necessary to establish from other BNB and suppliers' catalogues the current SBNs in respect of approximately 10,000 titles. The information could then be transferred by handwriting the number (10 digits) into the 'mini' catalogue in readiness for subsequent punching. The clerical work load is approximately 5 man weeks and the cost would be £100. Associated punching costs would be approximately £190.

7. CONCLUSIONS

What has been said illustrates the library catalogue and associated systems as a realistic and practical development. It indicates what kind of repercussions will be felt by the library and how it could improve the service to the readers. The advantages and disadvantages of the various alternative means of producing the new catalogue have been discussed. In terms of cost, the use of microfilm is not quite so competitive as the locally printed catalogue. However, the main disadvantages of microfilm is the fact that the general public would be expected to operate a relatively sophisticated method of retrieval which implies that difficulties and perhaps even user resistance might occur.

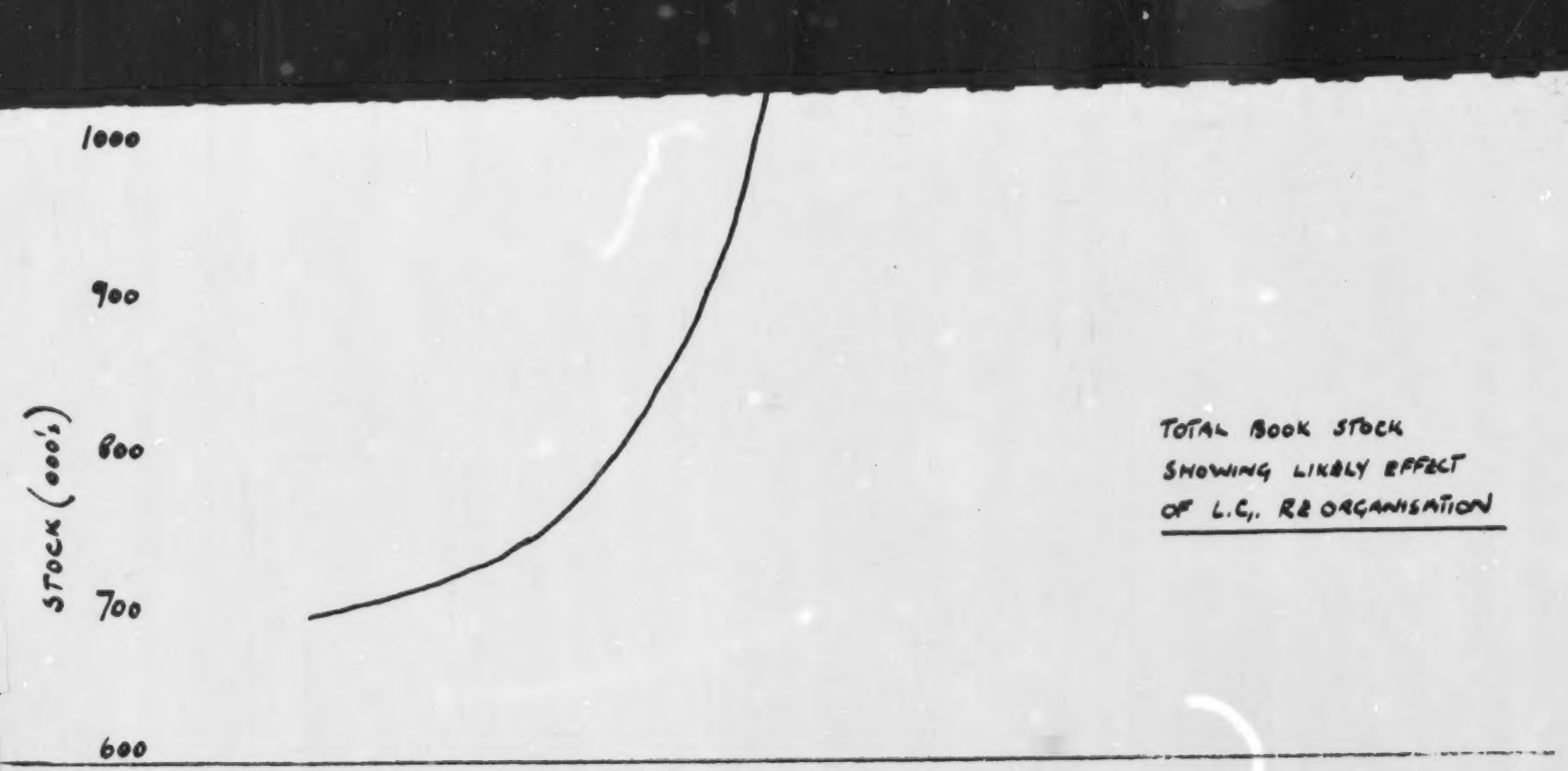
Various difficulties in connection with book charging, have, in the past, evoked criticism (though unjustified in some cases) from the public. It is considered that the relative complexity of microfilmed catalogues, compared with the printed catalogue, might well generate further adverse public comment. For these reasons therefore the feasibility study team consider the most satisfactory method of producing the catalogue is the printed book version.

On the question of computer processing costs it has been assumed that the disc storage facilities will be available for the All Titles File. On this basis approximate annual operational costs (both data processing and clerical) will be £5,413 or, expressed another way, approximately £2,650 less than the current annual costs. These figures do not take into account the cost of catalogue reproduction, alternative methods of which are at present being investigated, as mentioned in Section 3.9. Initial development and conversion costs are estimated at £22,580. The computer cost included in the estimates are based on the existing installation at County Hall, though future hardware provision may necessitate some modification to the figures mentioned above. At the current rate of growth, under normal conditions, the size of the catalogue is expected to increase by approximately 5-10% per annum. This is not likely to cause insuperable problems regarding processing and general handling.

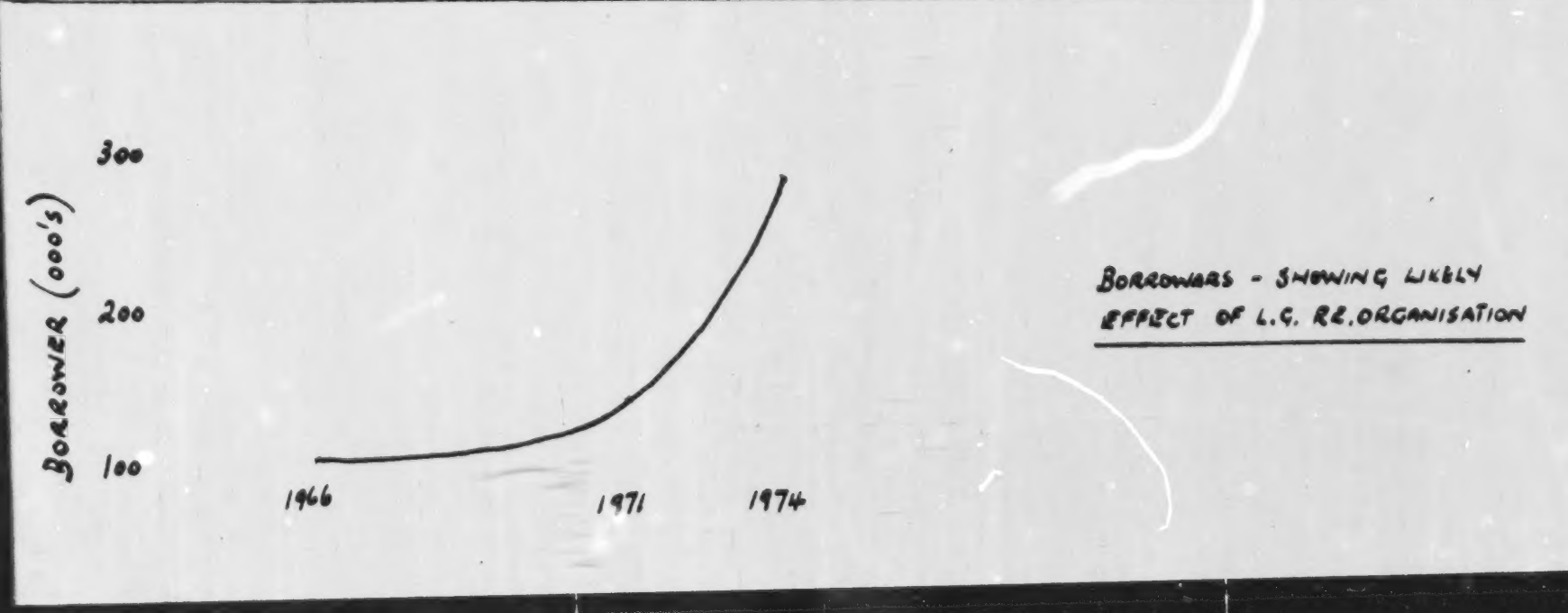
Systems design is expected to take 32 man weeks and programming a further 93 man weeks.

8. RECOMMENDATION

In view of the numerous benefits, mentioned in the report, which will be felt by both the Library Service and the public, it is recommended that the proposed integrated system for Book Ordering, Cataloguing, Reservations, Stock Editing and Book Charging should be implemented.



TOTAL BOOK STOCK
SHOWING LIKELY EFFECT
OF L.C. RE ORGANISATION



BORROWERS - SHOWING LIKELY
EFFECT OF L.C. RE.ORGANISATION

APPENDIX. I

Catalogues – Present System (pre 1966 stock)

820653 | CRAFTS, Alden Springer, and ROBBINS, Wilfred
Class: 632.58
Weed control.
McGraw-Hill, 1962.
Vendor or Donor: Dillon
Cost: 5 | 14 | 6
Date: - OCT 62
Remarks:

H.Q. Stock card.

568 // COCKRELL, H A L //
03 Insurance.//
English Universities Press.// 1957.//
x,236p. bibliog. 075// (The teach yourself books)

Classified catalogue cards, for whole county: Chichester.

3/8 COCKRELL, H A L
Insurance.
English Universities Press, 1957.
x,236p. bibliog. (The teach yourself books)

Author catalogue cards, for whole County: Chichester.

Chichester
location book cards.

- ditto -

Chichester mobile
location book cards.

- Ditto -

HQ Reserve
location book cards.

Y10.4
838056 Cook, Kenneth. (A 1939)
[illegible]
A family travelling around the world by various means and very little money.

Classified catalogue cards for each region.

Y10.4
838056 Cook, Kenneth. (A 1939)
[illegible]

Author catalogue cards for each region.

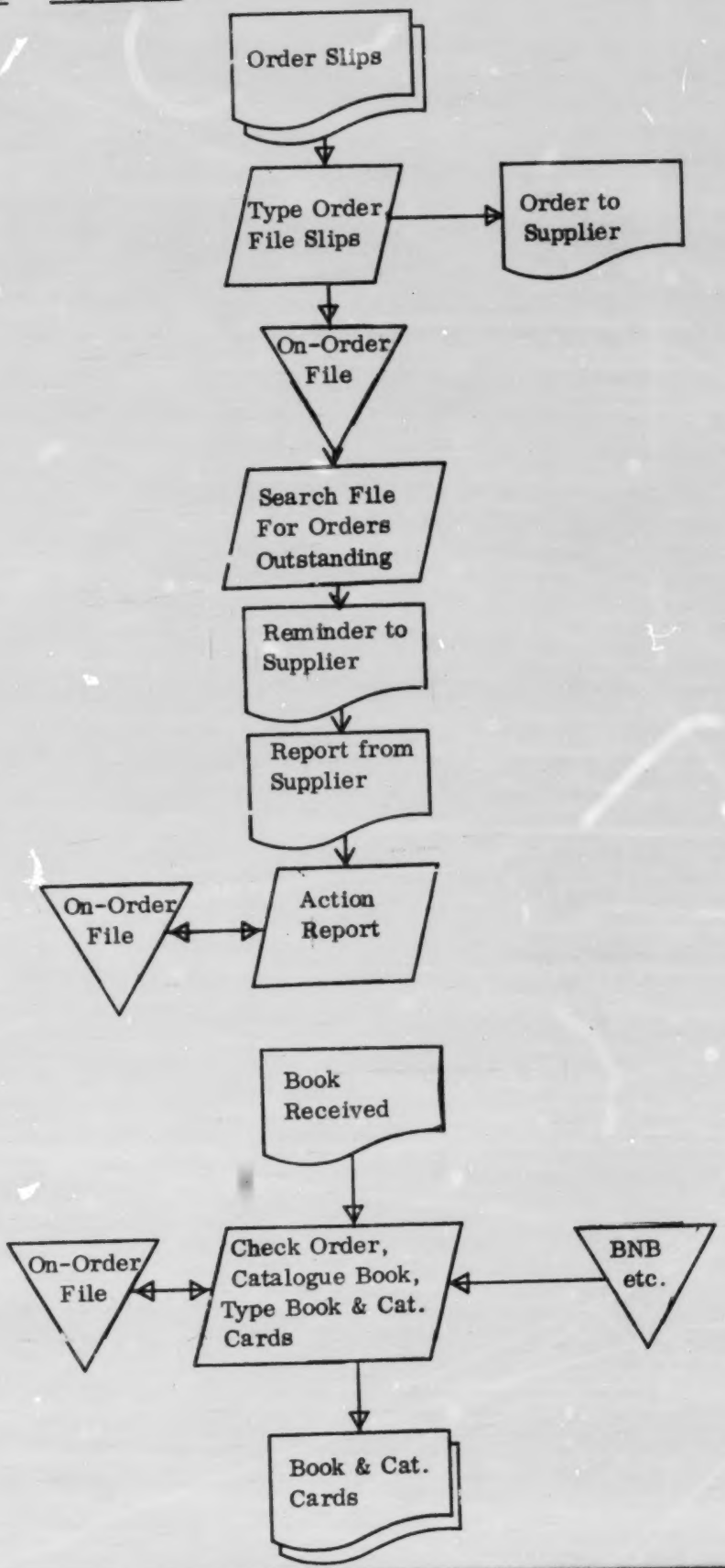
Location book cards for each region.
(a) lending library.
(b) mobile library.

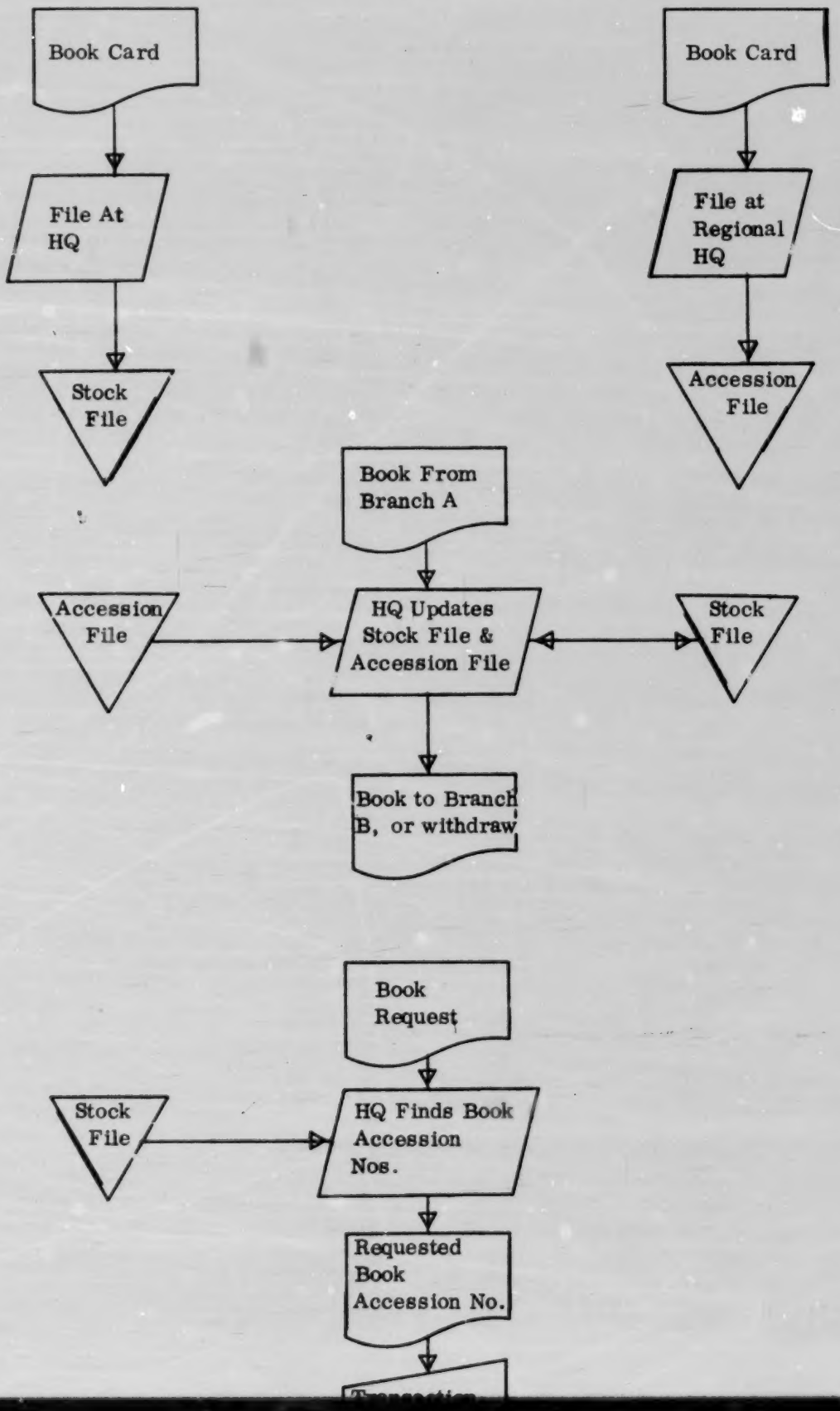
- ditto -

003079	BOAS,GUY,COMPILER	SHORT MODERN PLAYS.FIRST SERIES		39	822.918
003080	BOAS,MARY L	MATHEMATICAL METHODS IN THE PHYSICAL SCIENCES		66	510
003081	BOASE,ALAN M.,COMPILER	POETRY OF FRANCE.VOL.4.1900-1965:AN ANTHOLOGY		69	841.08
003082	BOASE,ALAN M.,COMPILER	POETRY OF FRANCE.VOL.3.1800-1900 AN ANTHOLOGY		67	841.08
003083	BOASE,THOMAS S.R	CASTLES AND CHURCHES OF THE CRUSADING KINGDOM		67	Q728.81
003084	BOASE,THOMAS S.R	ST.FRANCIS OF ASSISI		68	B FRANCIS OF AS
003085	BOAT WORLD	SAIL & POWERBOAT YEAR BOOK.CURRENT EDITION			R797.1
003086	BOATENG,ERNEST A	GEOGRAPHY OF GHANA	2ND	66	916.67
003087	BOCCACCIO,GIOVANNI	DECAMERONE.NOVELLE SCELTE DAL DECAMERONE		68	853.1BOCCACCIO
003088	BOCK,ROBERT H.,AND HOLSTEIN,WILLIAM K	PRODUCTION PLANNING AND CONTROL		63	658.5
003089	BOCARD,LUCIEN	QUICKSAND WAR PRELUDE TO VIETNAM		67	959
003090	BODDE,DERK,AND MORRIS,CLARENCE	LAW IN IMPERIAL CHINA		67	349.51
003091	BODE,WILHELM VON,AND KUHNEL,ERNST	ANTIQUE RUGS FROM THE NEAR EAST		70	Q746.7
003092	BODIN,F.,AND CHEINISSE,C.F	POISONS		70	615.9
003093	BODLEY,RONALD V.C	SOUNDLESS SAHARA		68	T66.11
003094	BODOR,JOHN	CREATING AND PRESENTING HAND PUPPETS		67	791.53
003095	BODOR,JOHN J	RUBBINGS AND TEXTURES:A GRAPHIC TECHNIQUE		68	745.54
003096	BODS-GRTH,FRED	LAST OF THE CURLEWS	NEW	66	598.33
003097	BODY,GEOFFREY	BRITISH PADDLE STEAMERS		71	387.54
003098	BOEGNER,MARC	LONG ROAD TO UNITY:MEMORIES AND ANTICIPATIONS		70	280.1
003099	BOEHM,KLAUS	BRITISH PATENT SYSTEM.VOL.1. ADMINISTRATION		67	608
003100	BOEHM,KLAUS,EDITOR	UNIVERSITY CHOICE		66	378
003101	BOEHM,THEOBALD	FLUTE AND FLUTE-PLAYING		64	788.5
003102	BOESCH,HANS	GEOGRAPHY OF WORLD ECONOMY		64	Q330.9
003103	BOESCHENSTEIN,HERMANN	GERMAN LITERATURE OF THE NINETEENTH CENTURY		69	830.9
003104	BOESEN,GUDMUND	DANISH MUSEUMS		66	708.89

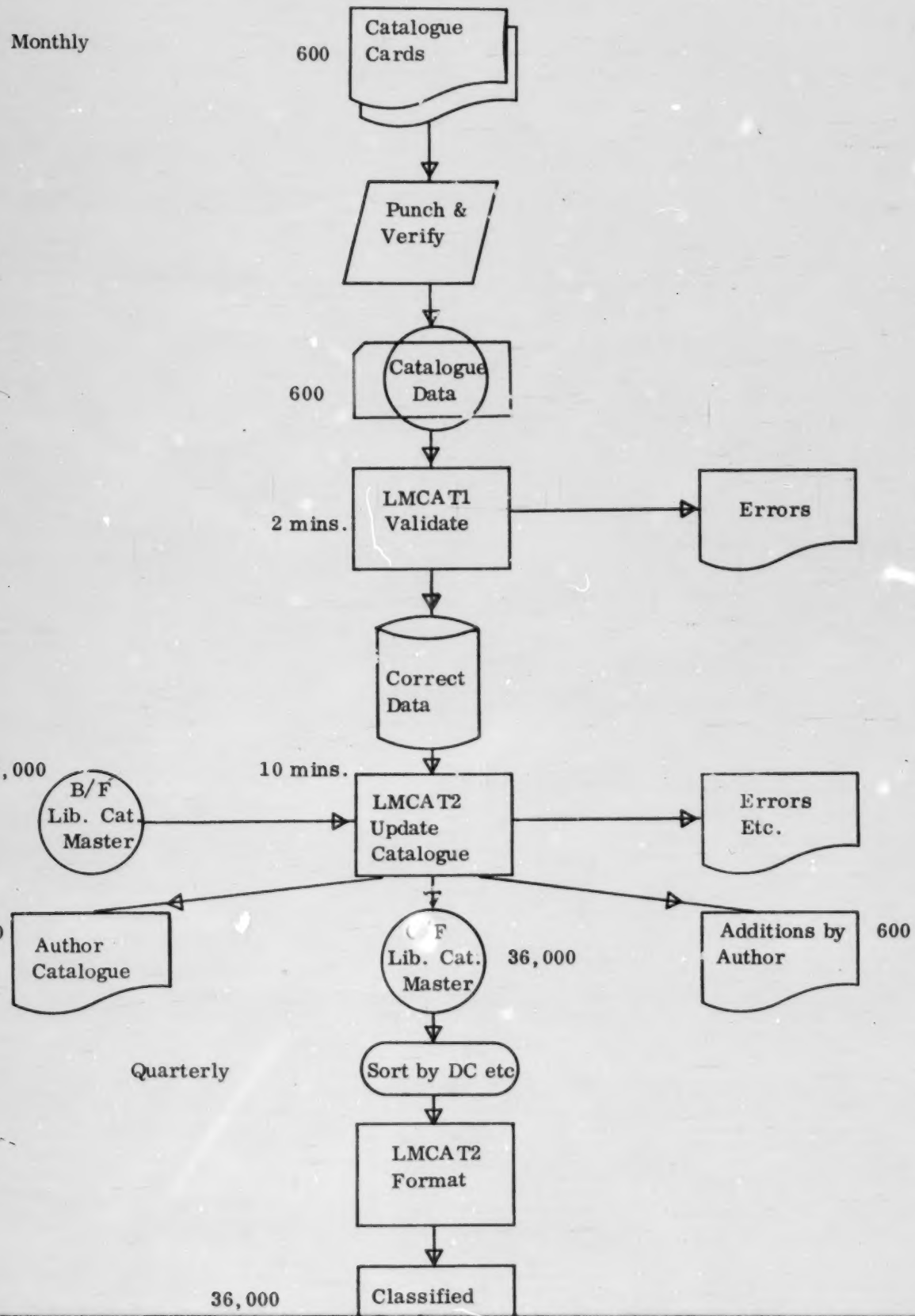
024921	PARLIAMENT	D NOTICE SYSTEM		67	R323.445
024930	PARLIAMENT	REPORT OF COMM.PRIVY COUNS.TO INQUIRE INTO D NOTICE		67	R323.445
012518	GOODMAN,WALTER	COMMITTEE		69	323.49
015224	HOME OFFICE	STATISTICS OF PERSONS ACQUIRING CITIZENSHIP.1966-			R323.6142
018357	LAKEMAN,ENID	HOW DEMOCRACIES VOTE	3RD	70	324.24
026543	RAMELSON,MARIAN	PETTICOAT REBELLION		67	324.3
000347	ALEXANDER,ANDREW,AND WATKINS,ALAN	MAKING OF THE PRIME MINISTER 1970		70	324.42
002997	BLUMLER,JAY G.,AND MACQUAIL,DENIS	TELEVISION IN POLITICS ITS USES AND INFLUENCE		68	324.42
004871	BUTLER,DAVID H.E	ELECTORAL SYSTEM IN BRITAIN SINCE 1918	2ND	63	324.42
004875	BUTLER,DAVID H.E.,AND KING,ANTHONY	BRITISH GENERAL ELECTION OF 1966		66	324.42
004875	BUTLER,DAVID H.E.,AND STOKES,DONALD	POLITICAL CHANGE IN BRITAIN		69	324.42
007486	CRAIG,FREDERICK W.S.,COMPILER	BRITISH PARLIAMENTARY ELECTION STATISTICS,1918-1968		68	R324.42
007948	DAILY TELEGRAPH	ELECTION 66 GALLUP ANALYSIS OF THE VOTING RESULTS		66	324.42
010614	FENBY,CHARLES	OTHER OXFORD		70	324.42
013725	HANHAM,HAROLD J	REFORMED ELECTORAL SYSTEM IN GT.BRITAIN 1832-1914		68	R324.42
014406	HELMORE,LEONARD M	CORRUPT AND ILLEGAL PRACTICES		67	324.42
015249	HOME OFFICE,AND SCOTTISH OFFICE	ELECTION EXPENSES		66	R324.42
017843	KINNEAR,MICHAEL	BRITISH VOTER AN ATLAS AND SURVEY SINCE 1885		68	R324.42
019364	LEONARD,RICHARD L	ELECTIONS IN BRITAIN		63	324.42
025261	PELLING,HENRY M	SOCIAL GEOGRAPHY OF BRITISH ELECTIONS 1885-1910		67	324.42
025505	PHILBIN,J.HOLLADAY	PARLIAMENTARY REPRESENTATION,1832 ENGLAND & WALES		65	R324.42
026353	PULZER,PETER G.J	POLITICAL REPRESENTATION AND ELECTIONS IN BRITAIN		67	324.42
027028	ROSE,RICHARD	INFLUENCING VOTERS		67	324.42
027782	ROVER,CONSTANCE	WOMEN S SUFFRAGE AND PARTY POLITICS IN BRITAIN		67	324.42
028021	RUSH,MICHAEL	SELECTION OF PARLIAMENTARY CANDIDATES		69	324.42

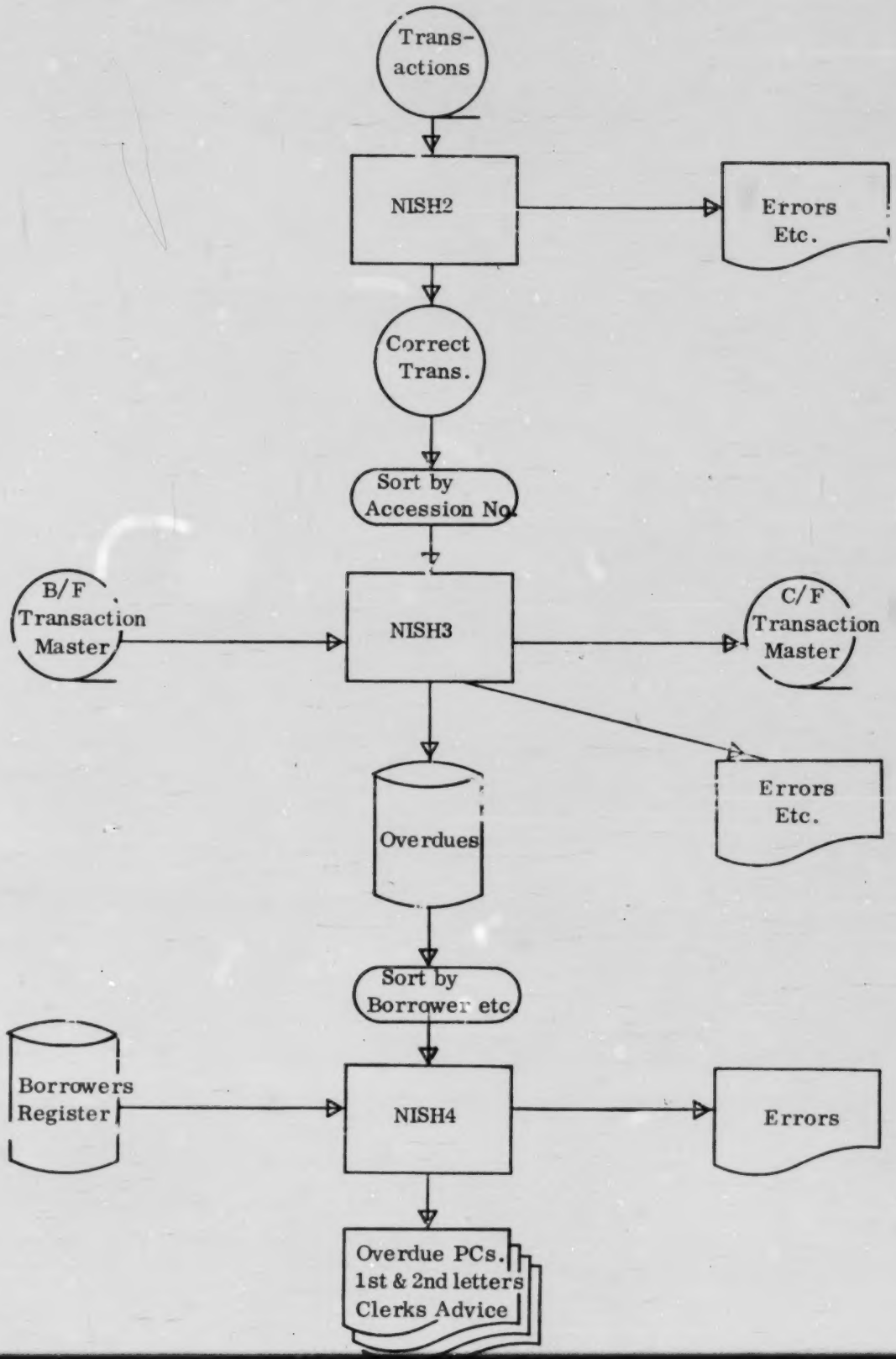
Order/Catalogue Page 1 of 5

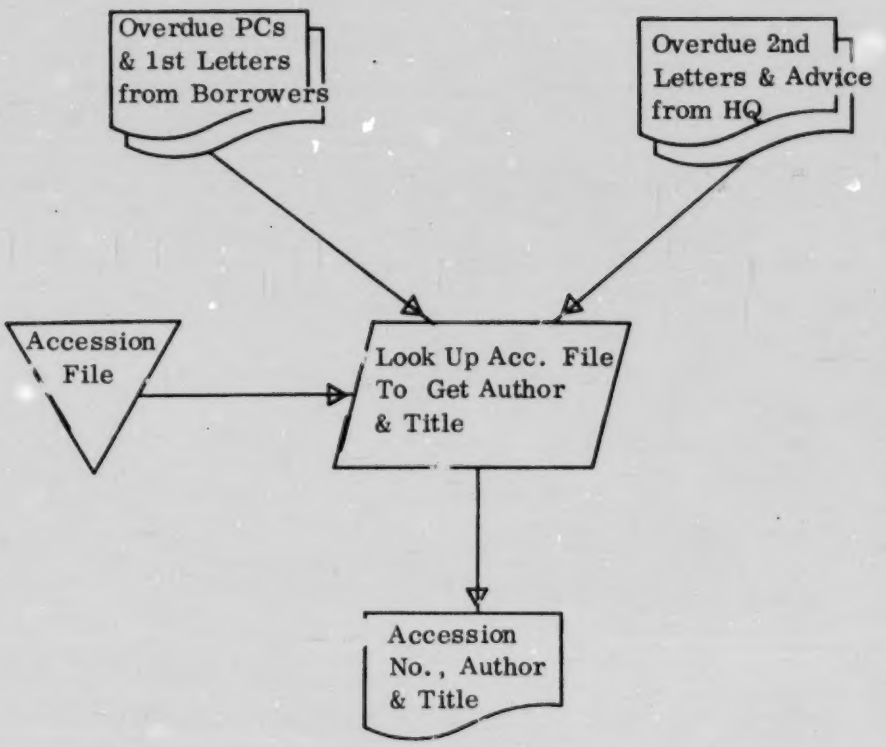


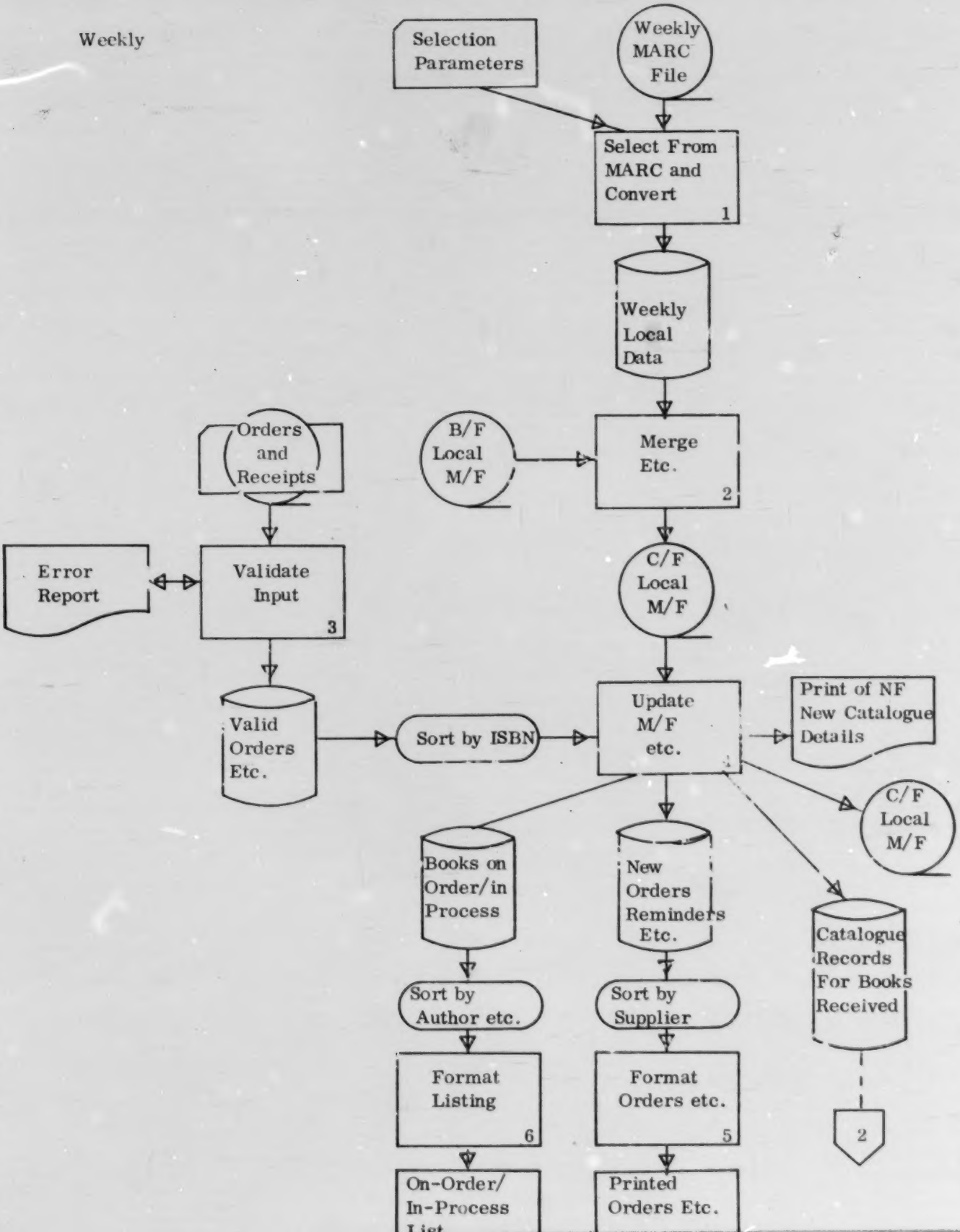

Book Card
File At HQ
Stock File
Book Card
File at Regional HQ
Accession File
Book From Branch A
Accession File
HQ Updates Stock File & Accession File
Stock File
Book to Branch B, or withdraw
Book Request
Stock File
HQ Finds Book Accession Nos.
Requested Book Accession No.

Catalogue Page 3 of 5

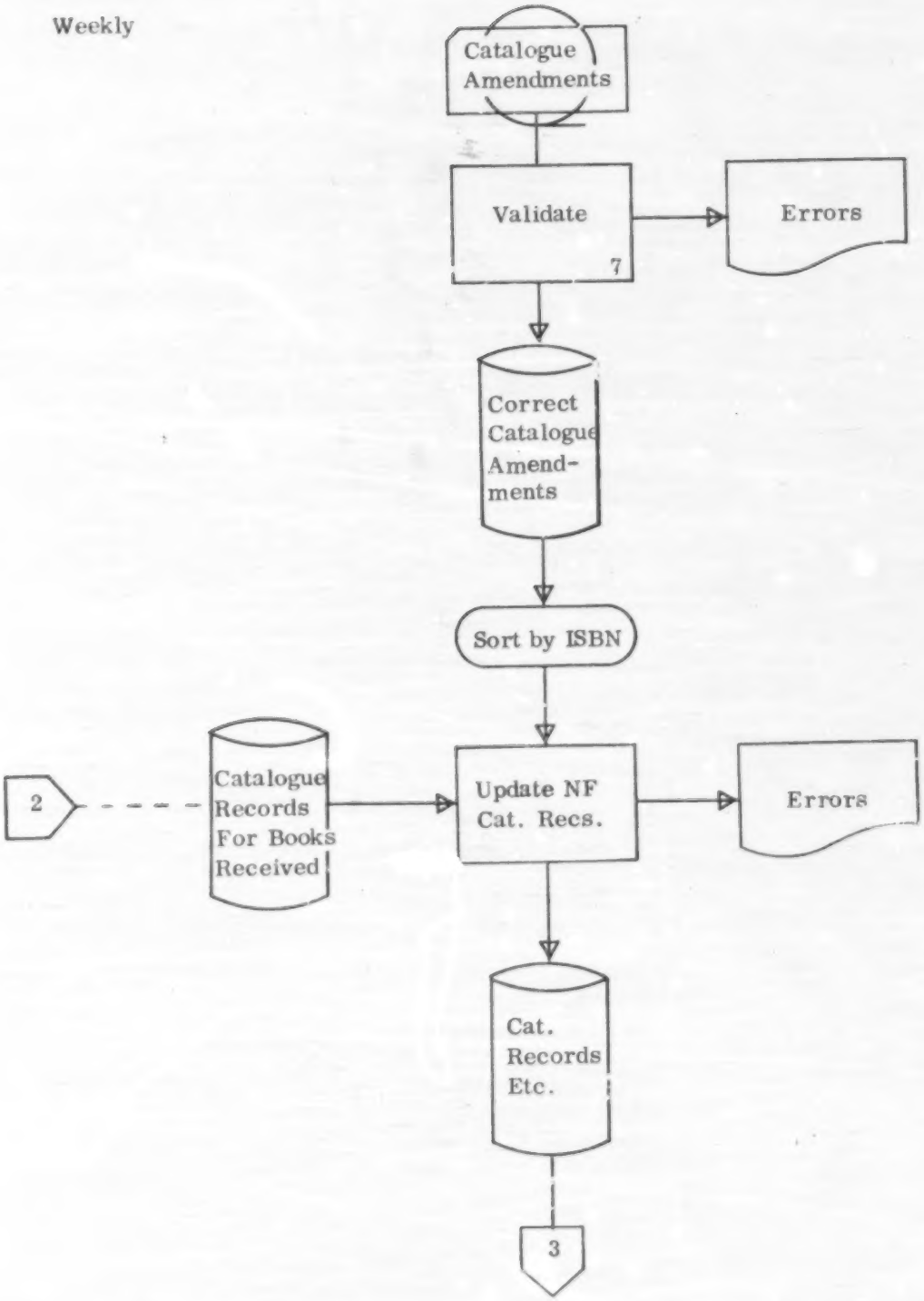


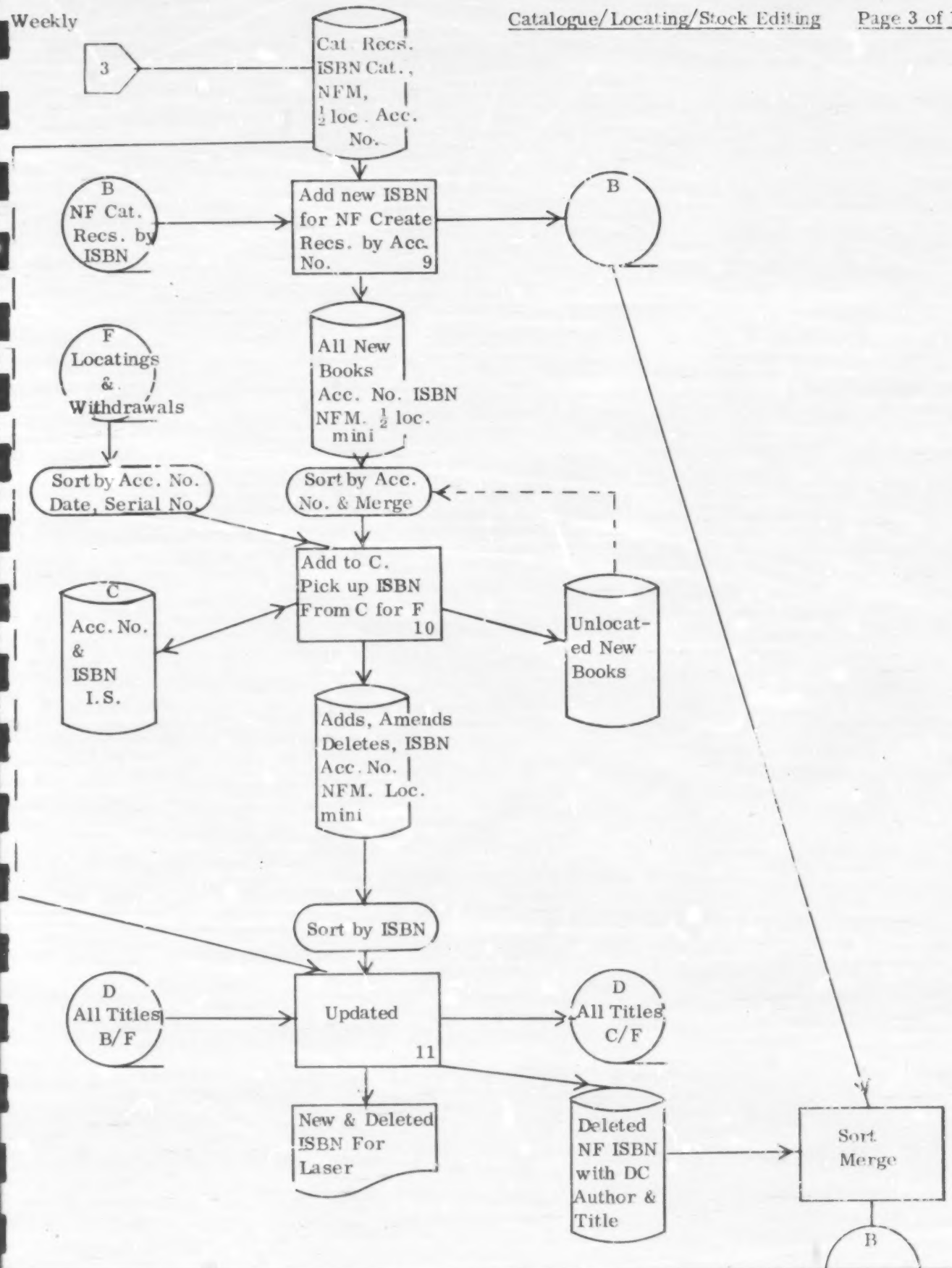

Trans-
actions
NISH2
Errors
Etc.
Correct
Trans.
Sort by
Accession No.
B/F
Transaction
Master
NISH3
C/F
Transaction
Master
Errors
Etc.
Overdues
Sort by
Borrower etc.
Borrowers
Register
NISH4
Errors
Overdue PCs.
1st & 2nd letters
Clerks Advice

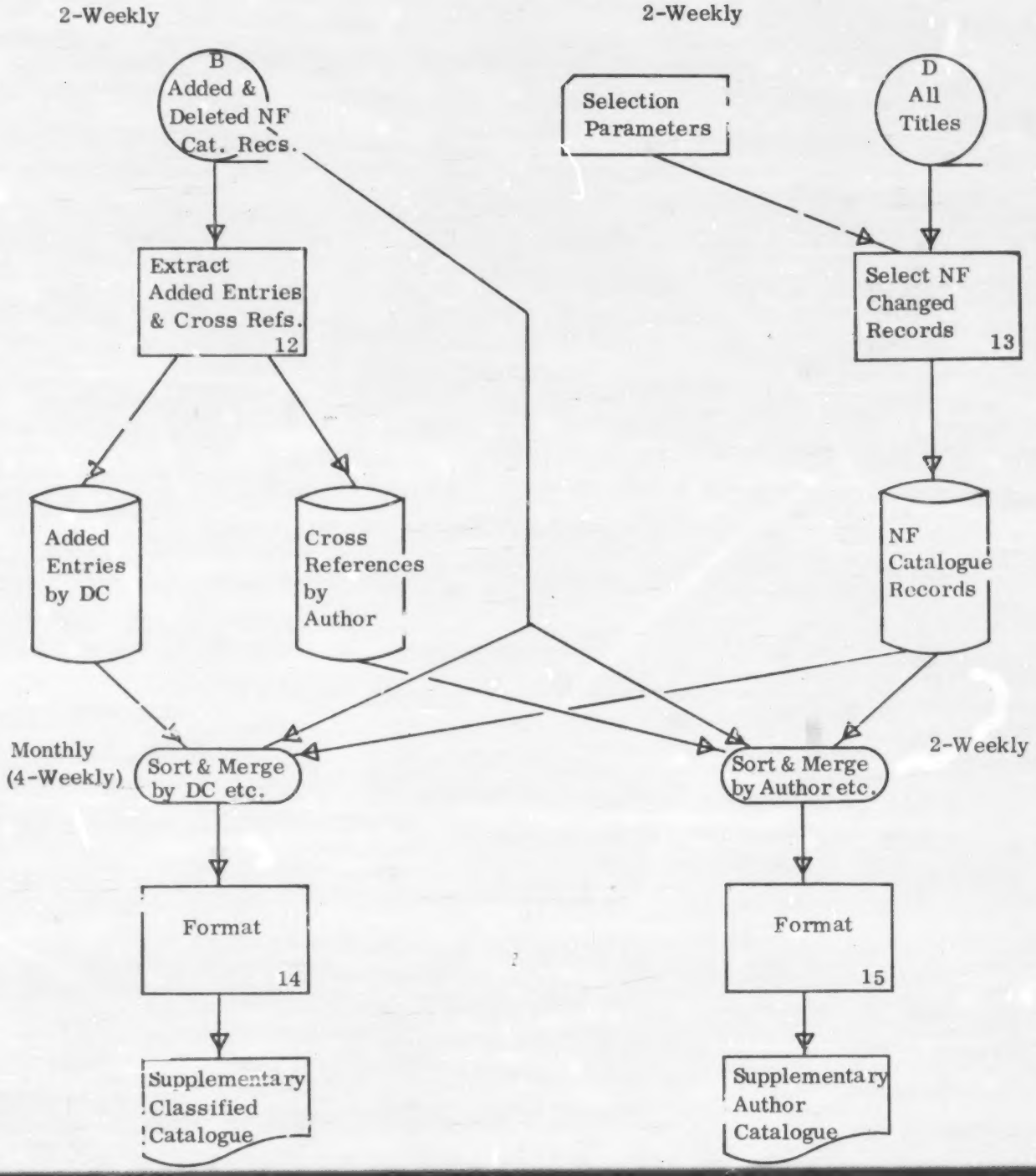

Overdue PCs & 1st Letters from Borrowers
Overdue 2nd Letters & Advice from HQ
Accession File
Look Up Acc. File To Get Author & Title
Accession No., Author & Title


Weekly
Selection Parameters
Weekly MARC File
Select From MARC and Convert
1
Weekly Local Data
Orders and Receipts
B/F Local M/F
Merge Etc.
2
Error Report
Validate Input
3
C/F Local M/F
Valid Orders Etc.
Sort by ISBN
Update M/F etc.
4
Print of NF New Catalogue Details
C/F Local M/F
Books on Order/in Process
New Orders Reminders Etc.
Catalogue Records For Books Received
Sort by Author etc.
Sort by Supplier
Format Listing
6
Format Orders etc.
5
2
On-Order/ In-Process List
Printed Orders Etc.

Weekly


Catalogue Amendments
Validate
7
Errors
Correct Catalogue Amend-ments
Sort by ISBN
2
Catalogue Records For Books Received
Update NF Cat. Recs.
Errors
Cat. Records Etc.
3


3
Cat. Recs. ISBN Cat., NFM, ½ loc. Acc. No.
B NF Cat. Recs. by ISBN
Add new ISBN for NF Create Recs. by Acc. No. 9
B
F Locatings & Withdrawals
All New Books Acc. No. ISBN NFM. ½ loc. mini
Sort by Acc. No. Date, Serial No.
Sort by Acc. No. & Merge
Add to C. Pick up ISBN From C for F 10
C Acc. No. & ISBN I.S.
Unlocated New Books
Adds, Amends Deletes, ISBN Acc. No. NFM. Loc. mini
Sort by ISBN
D All Titles B/F
Updated 11
D All Titles C/F
New & Deleted ISBN For Laser
Deleted NF ISBN with DC Author & Title
Sort Merge
B


2-Weekly
2-Weekly
B
Added &
Deleted NF
Cat. Recs.
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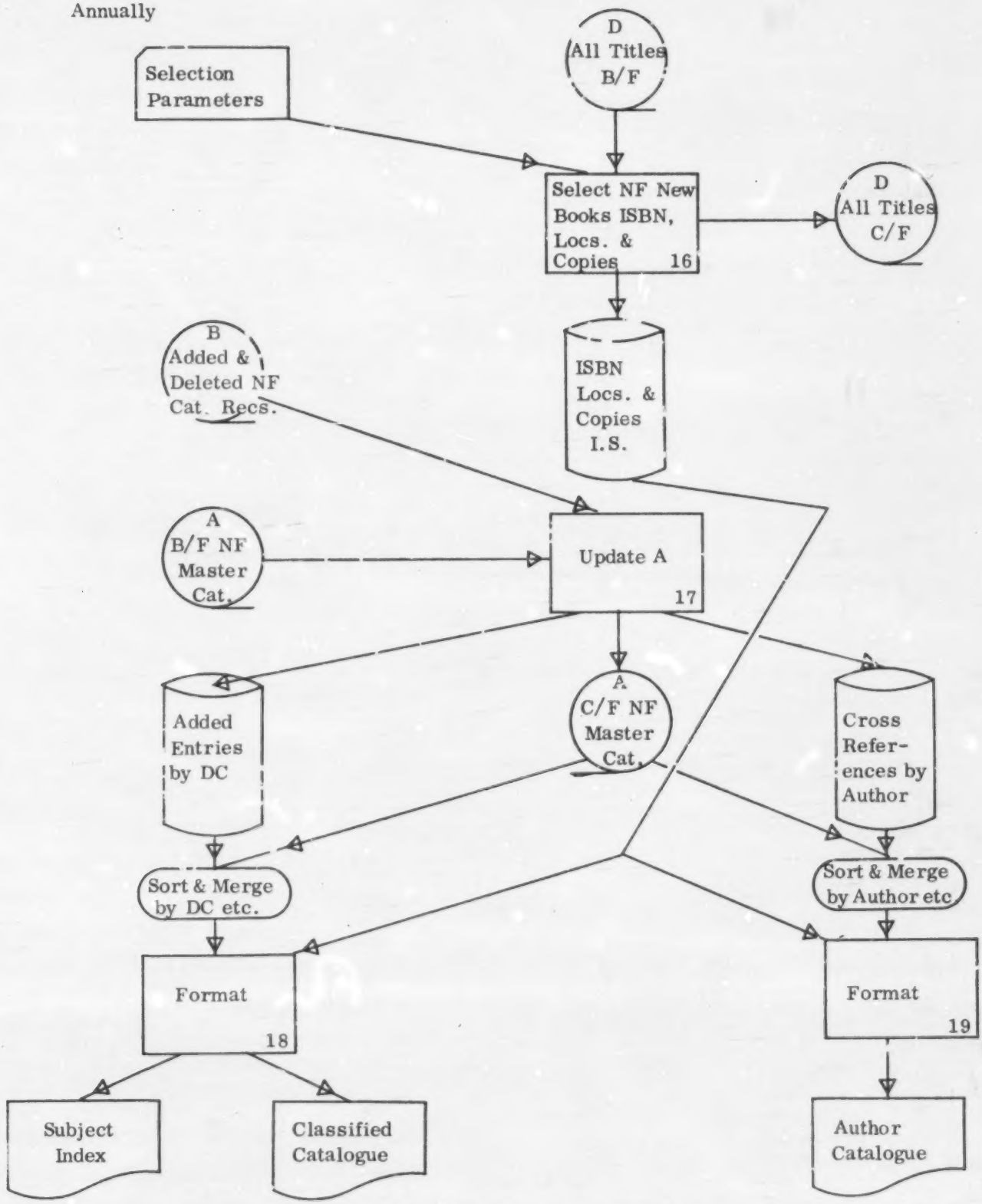
D
All
Titles
Extract
Added Entries
& Cross Refs.
12
Select NF
Changed
Records
13
Added
Entries
by DC
Cross
References
by
Author
NF
Catalogue
Records
Monthly
(4-Weekly)
Sort & Merge
by DC etc.
Sort & Merge
by Author etc.
2-Weekly
Format
14
Format
15
Supplementary
Classified
Catalogue
Supplementary
Author
Catalogue

Annually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A B/F NF Master Cat.
Update A 17
Added Entries by DC
A C/F NF Master Cat.
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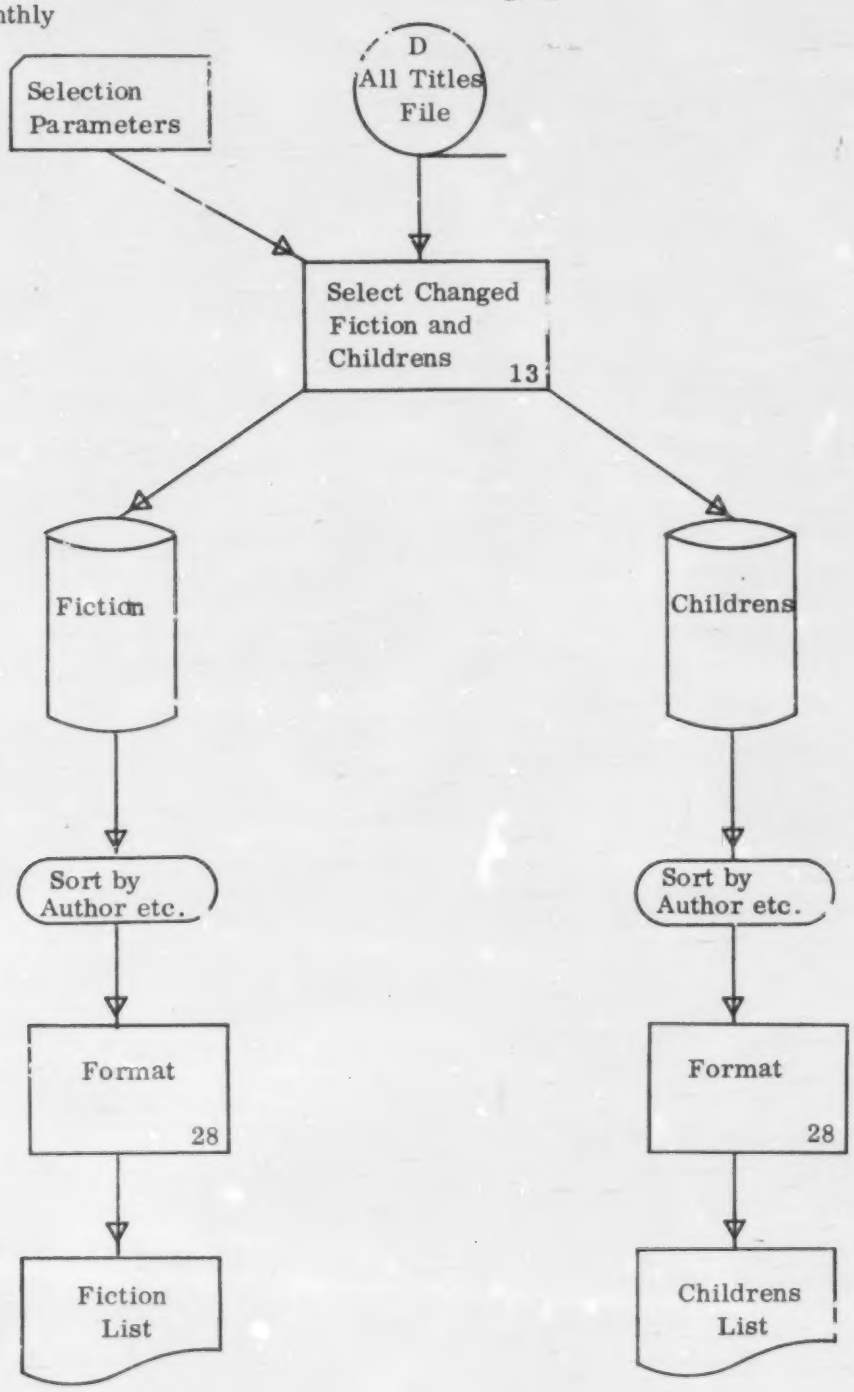
Sort & Merge by DC etc.
Sort & Merge by Author etc
Format 18
Format 19
Subject Index
Classified Catalogue
Author Catalogue

3-Monthly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Childrens
Sort by Author etc.
Sort by Author etc.
Format
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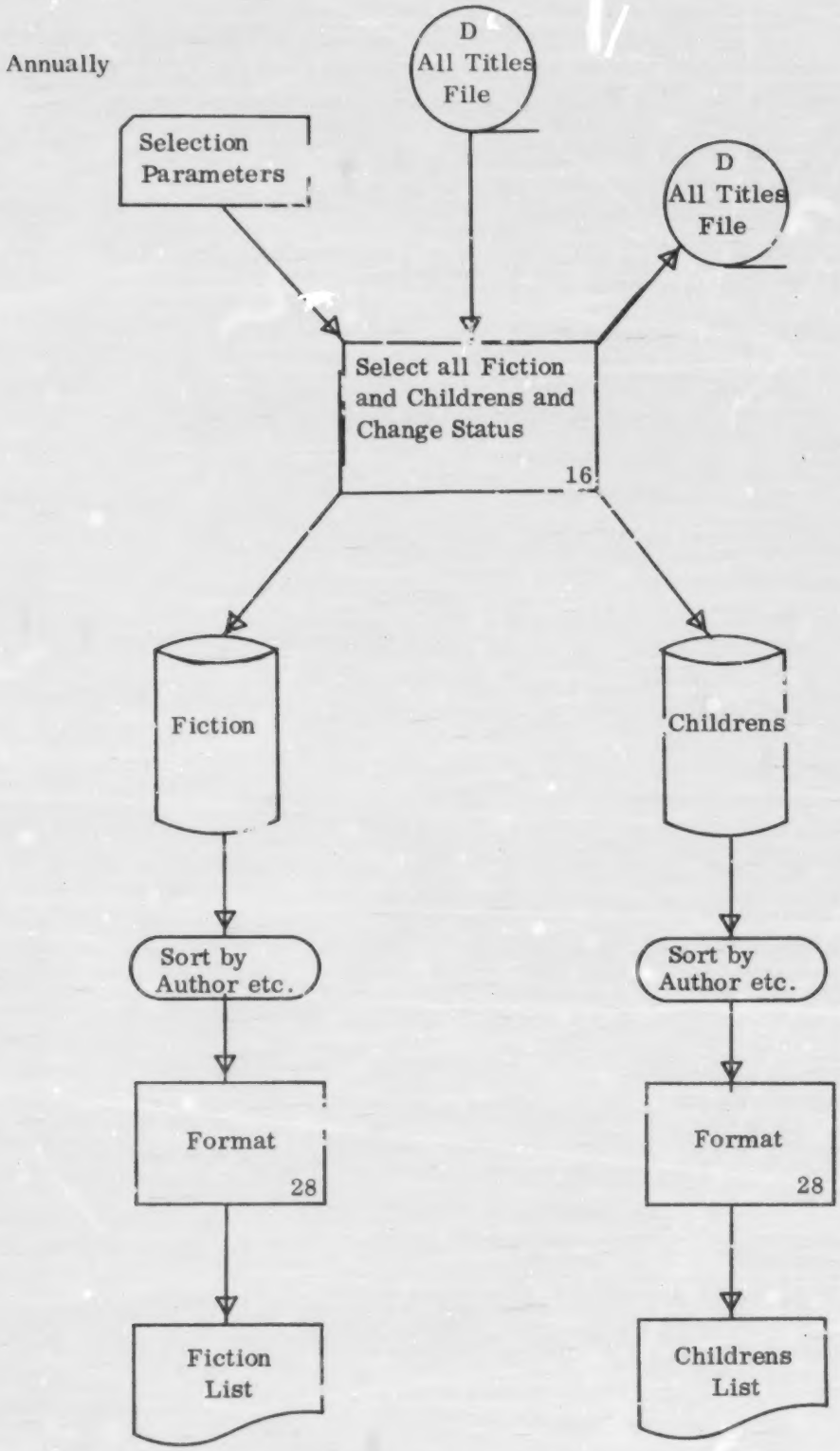
Format
28
Fiction List
Childrens List


Annually
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All Titles
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File
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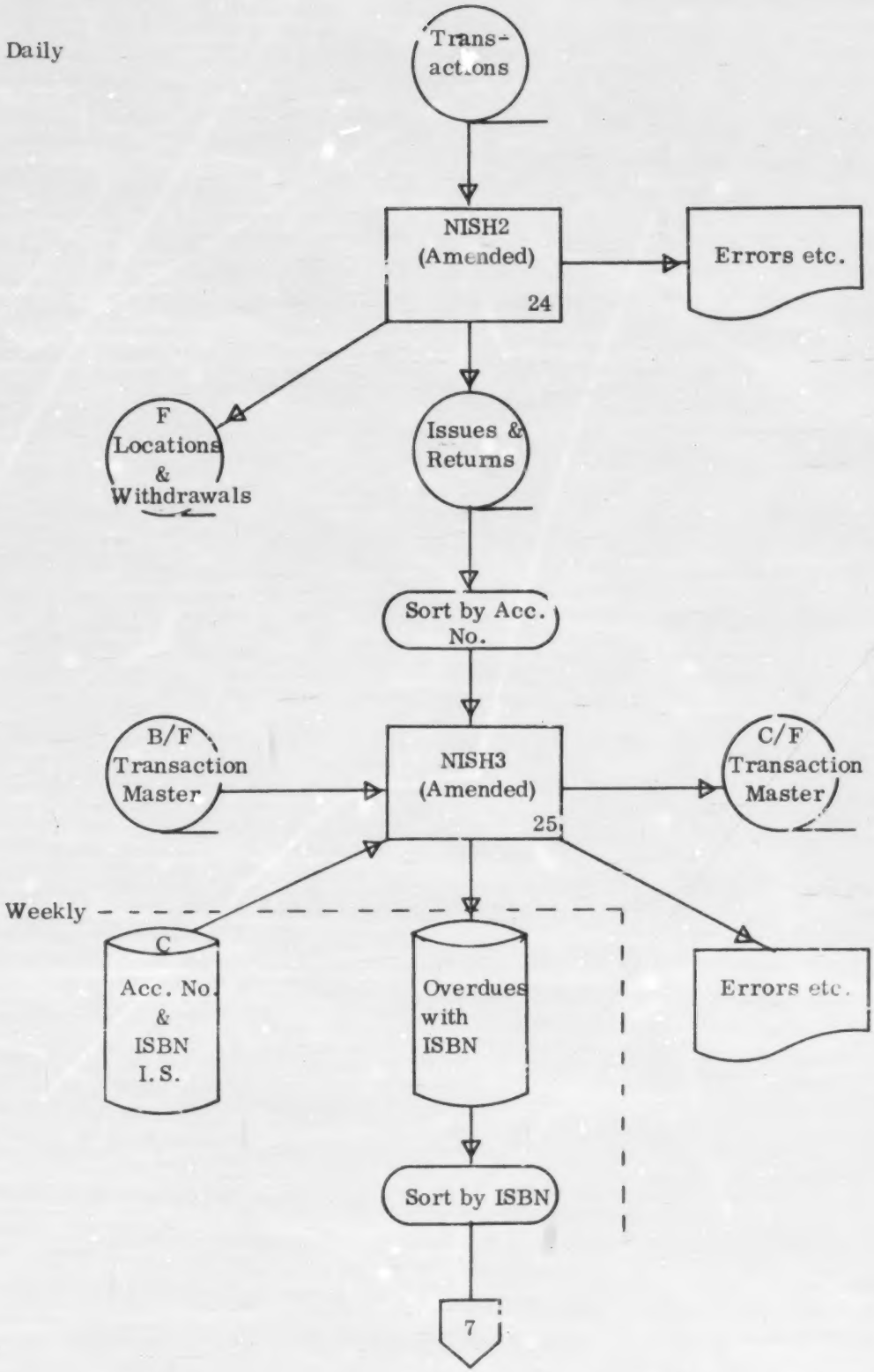
List
Childrens
List


Daily
Trans-
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NISH2
(Amended)
24
Errors etc.
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Locations
&
Withdrawals
Issues &
Returns
Sort by Acc.
No.
B/F
Transaction
Master
NISH3
(Amended)
25
C/F
Transaction
Master
Weekly
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&
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with
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Sort by ISBN
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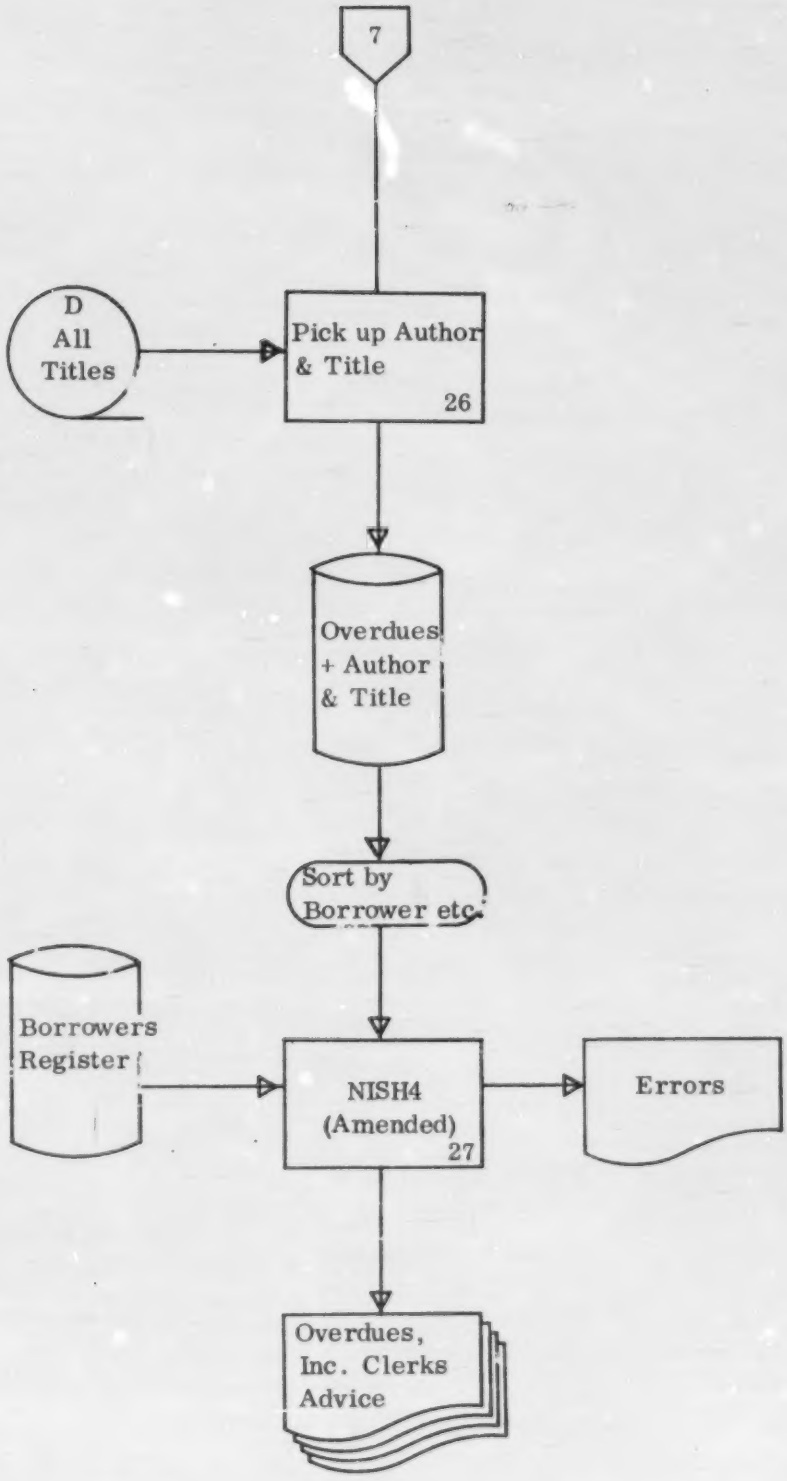
Weekly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Titles
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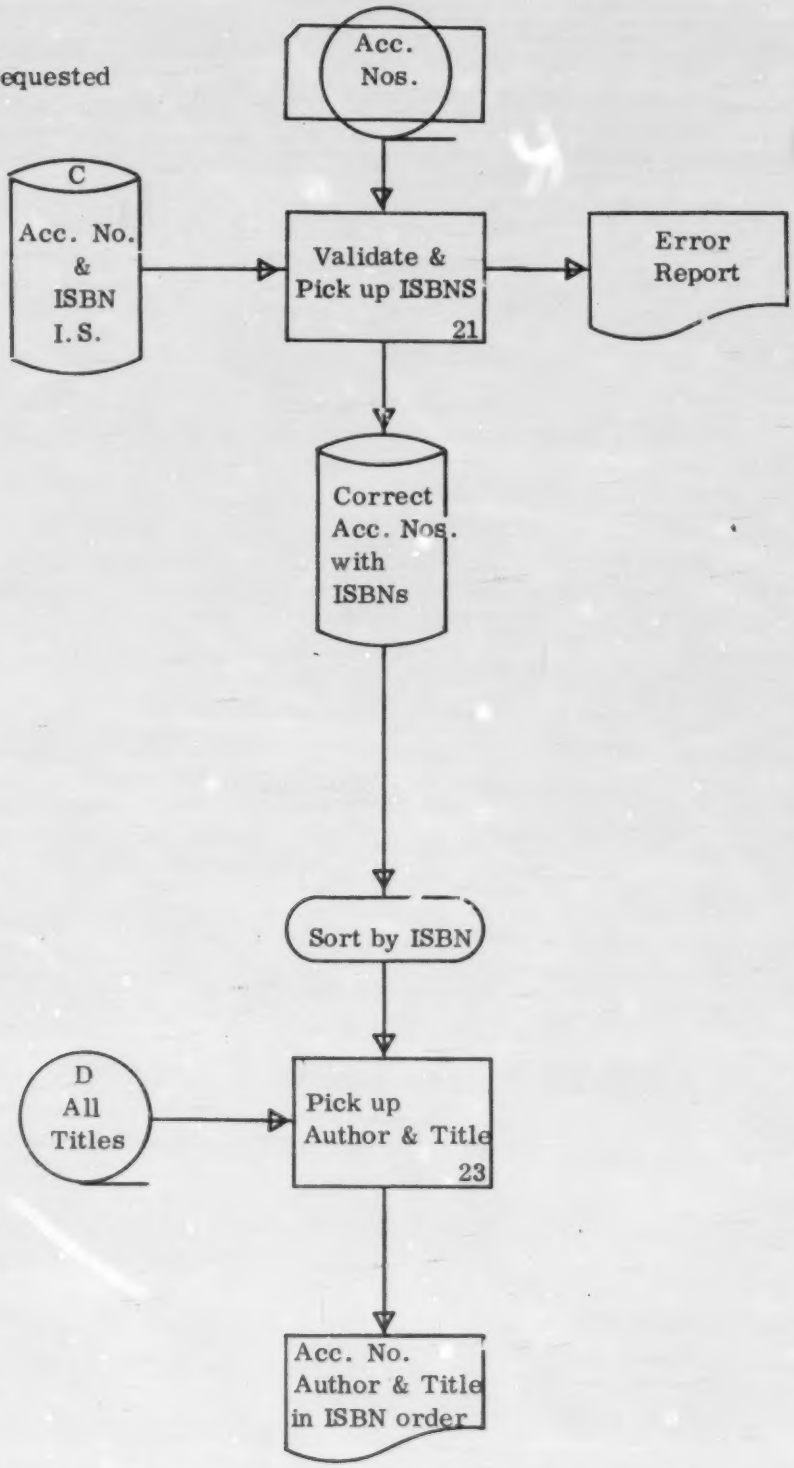
Inc. Clerks
Advice

Weekly if requested



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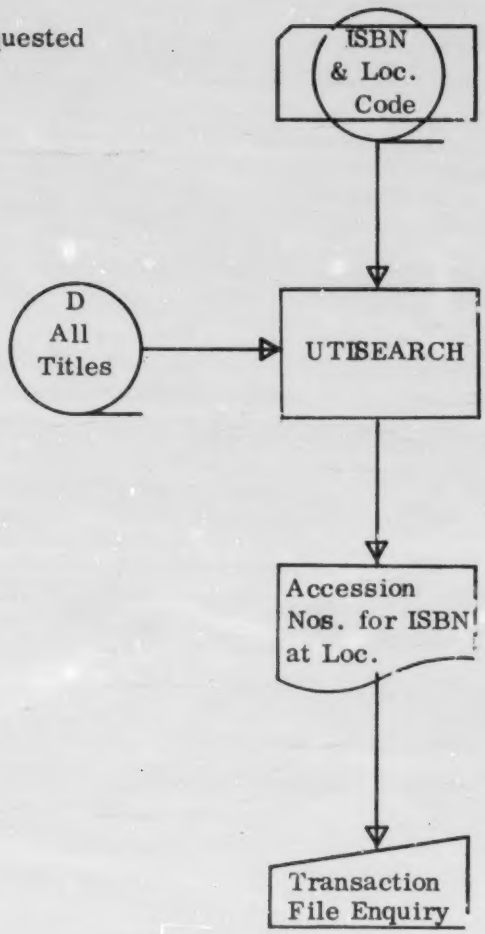

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324 ELECTIONS
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POLITICAL CHANGE IN BRITAIN
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CRAIG,FREDERICK W.S.,COMPILER
BRITISH PARLIAMENTRY ELECTION STATISTICS,1918-1968
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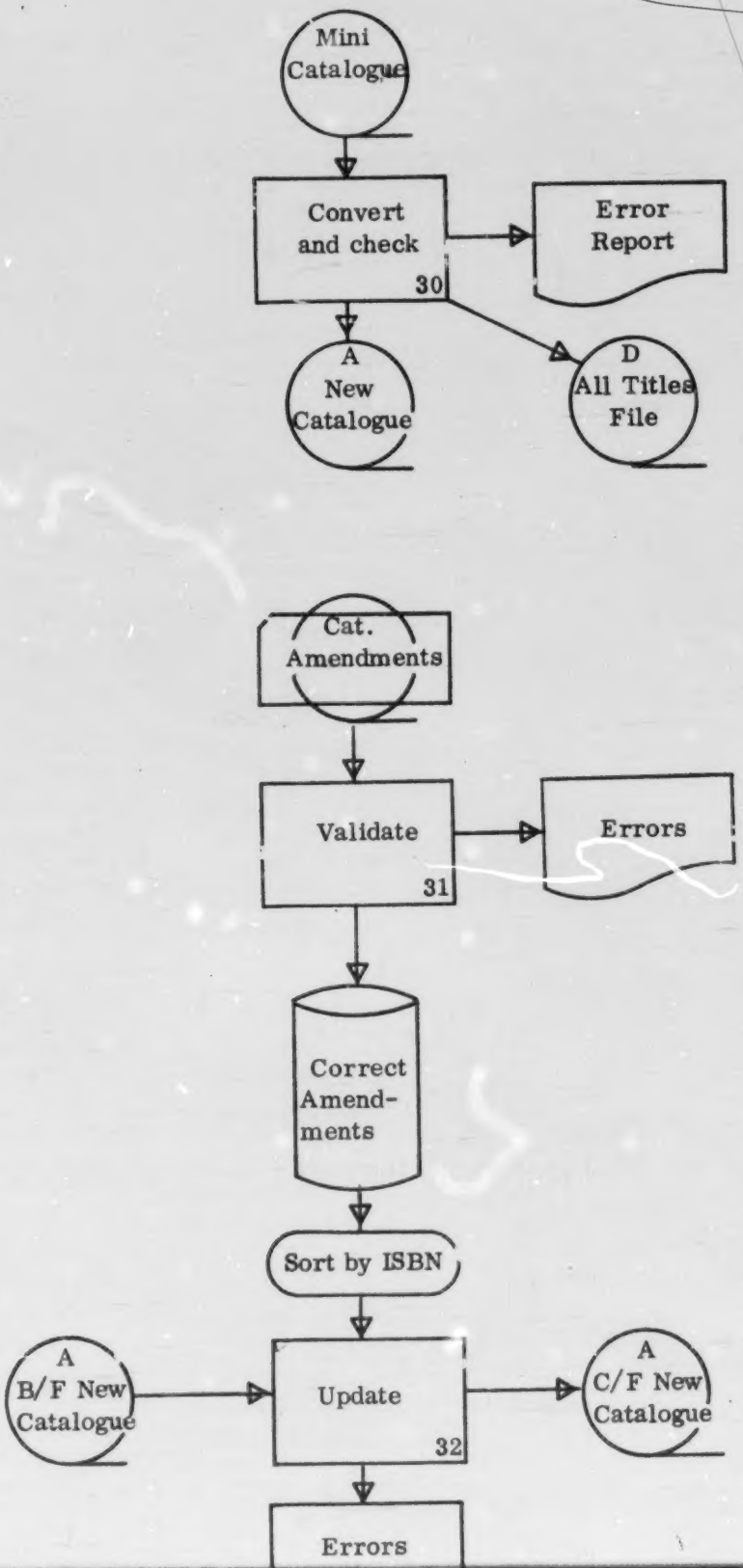
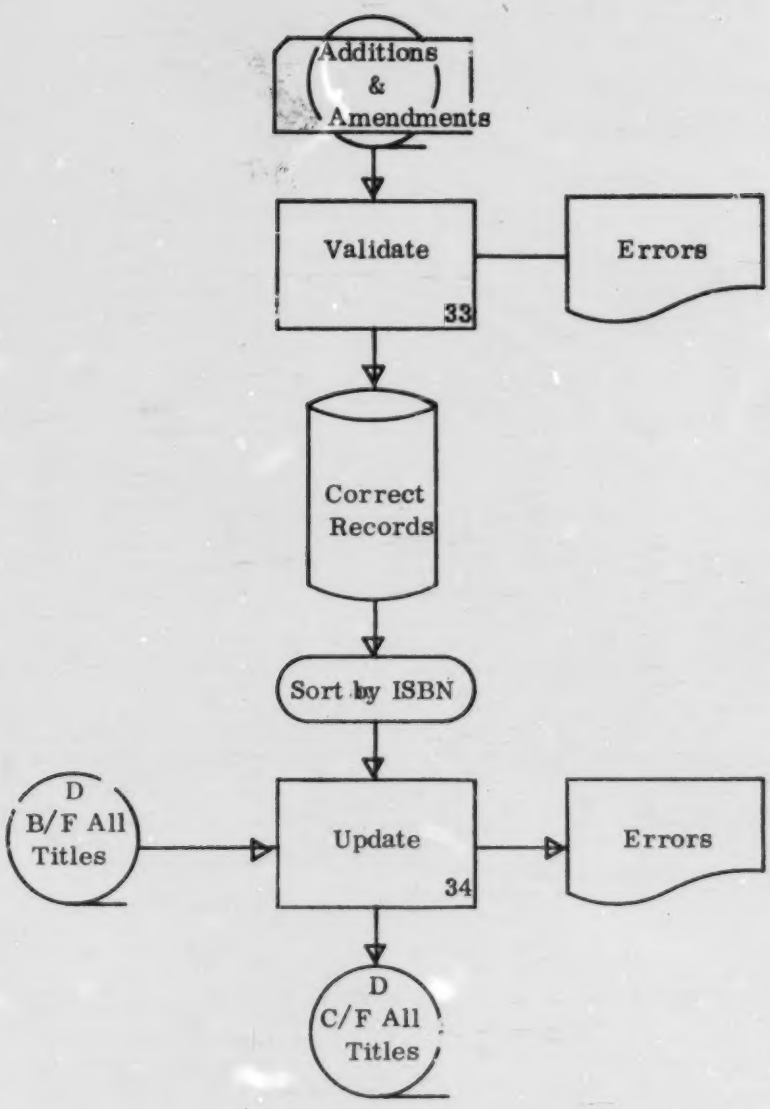
APPENDIX VII

Catalogue Conversion Page 1 of 3




Additions & Amendments
Validate
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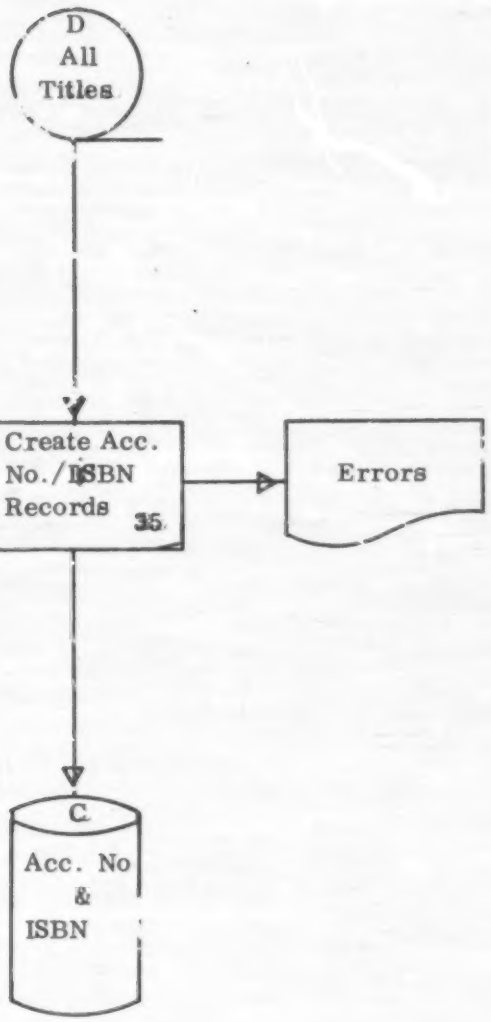
Correct Records
Sort by ISBN
D B/F All Titles
Update
34
Errors
D C/F All Titles

Link File & Creation (C) Page 3 of 3



File Type, Content and Size Assessment

	Organization	Record Length	No. of Records	Storage Medium	Storage Volume
ster Catalogue	Seq.	350 poss. av.	120,000	mag. tape	150'
l Titles	Seq	173 av.	190,000	mag. tape	3900'
l Titles-Alternative	I.S.	173 av.	190,000	2314 disc	238 cyl.
pplementary Catalogue	Seq.	350 poss. av.	increases to 12,700	mag. tape	up to 550'
nk	I.S.	18	700,000	2314 disc	90 cyl.
cal Master	Seq	400 poss. av.	10,000	mag. tape	480'
ansactions (existing)	Seq	30	130,000	mag. tape	1220'
rrowers (existing)	I.S.	162	110,000	~~data cell~~ 3330	~~550~~ 100 cyl.

Data Preparation Volumes

Ordering System	1320 Cards per week
Cataloguing	30 Cards per week
Conversion of System	320,000 Cards

Machine Utilization

Weekly - 115 minutes + 37 minutes extra on book charging
but if alternative 'All Titles' file is used this reduces
to 80 minutes + 27 minutes.

First fortnightly run	66 minutes
if alternative file	53 minutes
Second fortnightly run	123 minutes
if alternative file	110 minutes

These fortnightly runs alternate throughout the year

3 monthly average 1 hour 15 minutes

Annually 11 hours 20 minutes

Total per annum 142 hours 33 minutes.

Cost Implications

Note - Library staff costs are calculated at a standard rate of £1,000 p.a. and Salary overheads are excluded.

All Data Processing overheads are included.

Cost Saving	- £	Additional Costs	+ £
Reduction in Workload		**Annual recurring costs**	
Cataloguing		MARC II tape	500
(a) card preparation)		Data Preparation	1500
(b) " filing and removal (in respect of new)		Processing - catalogues)	5800
additions, withdrawals and stock transfer))	4090	ordering)	
(c) classification work)		Processing book charging	12500
(d) book handling (regarding stock editing and)		Catalogue production	10340
new stock))			30640
(e) access and reference to catalogue	1290		
(f) computer processing (mini catalogue)	2060	**Non recurring costs/savings**	
(g) catalogue reproduction		Feasibility Study	1600
Reservations		System design etc.	6000
handling, stock register checking, postal and telephone charges	1510	Programming	8125
		Program testing	2500
Book Ordering		Conversion program running	100
preparation of order cards, lists and follow up lists	560	Data preparation	7000
		Additional clerical labour	3500
Book Charging (Overdues)		Special furniture and catalogue binders	3000
(a) preparatory work, prior to despatch of overdues)		12 copies of adult non-fiction catalogue	350
(b) reduction in reader queries and reference to)			32175
book cards		Less sale of card cabinets	300
	10110		31875
		Less BNB Contribution	2500
			29375